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THE ARCHITECTS' JOURNAL

standard contents

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Architectural Appointments Wanted and Vacant

No. 3069] [VOL. 118

THE ARCHITECTURAL PRESS

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Registered as a Newspaper.

★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 49 Cadogan Square, S.W.1.	Sloane 1601/3158
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 14, Great James' Street, W.C.2.	Chancery 7718
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	Modern Architectural Research Group (English Branch of CIAM) Secretary: Gontran Goulden, Building Centre, 26, Store Street, W.C.1.	Museum 5400
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5051
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford.	Oxford 47988

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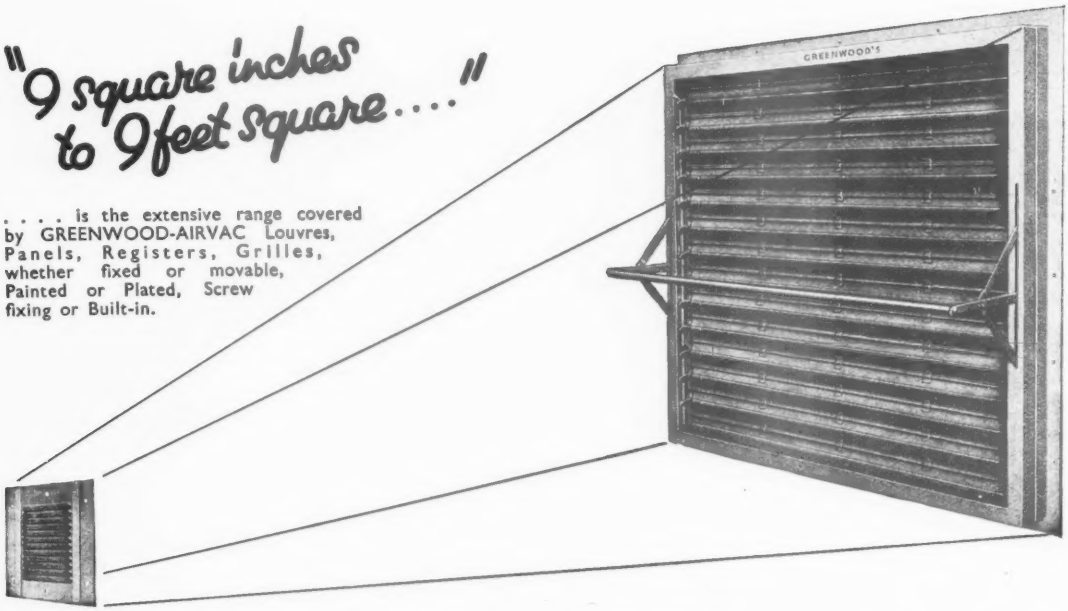

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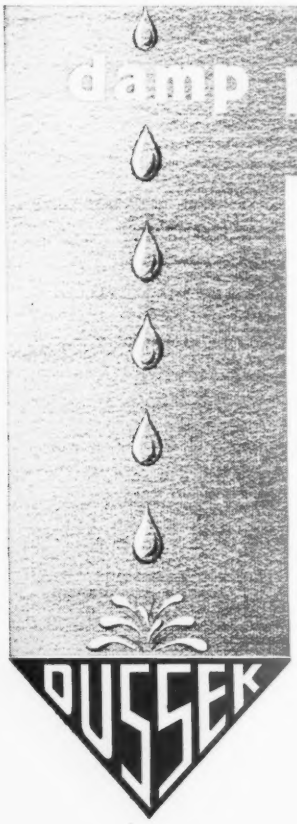

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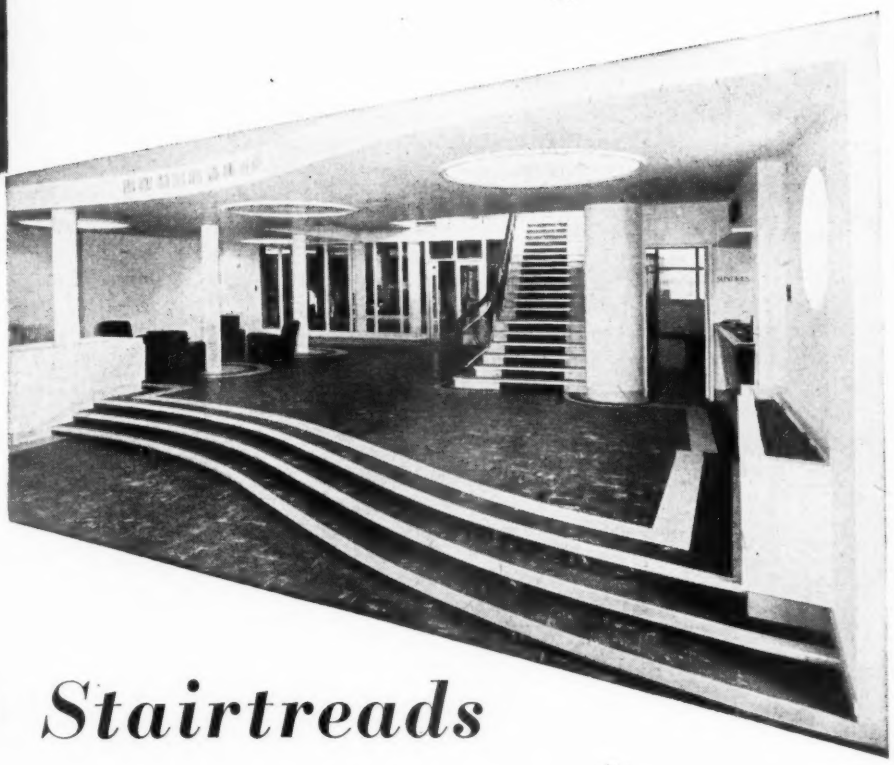

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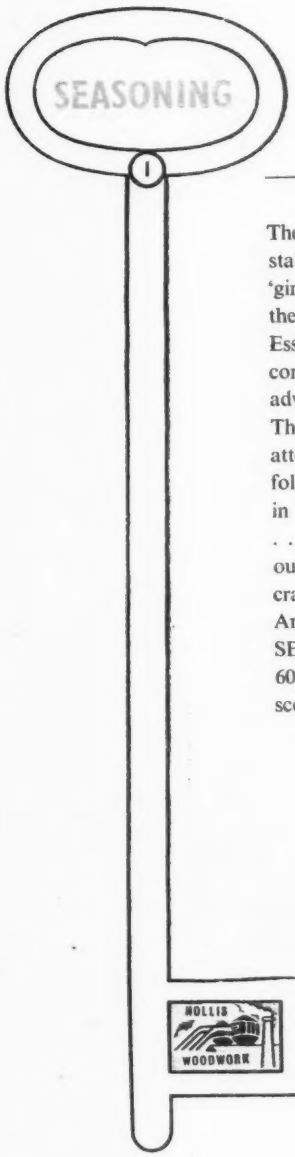

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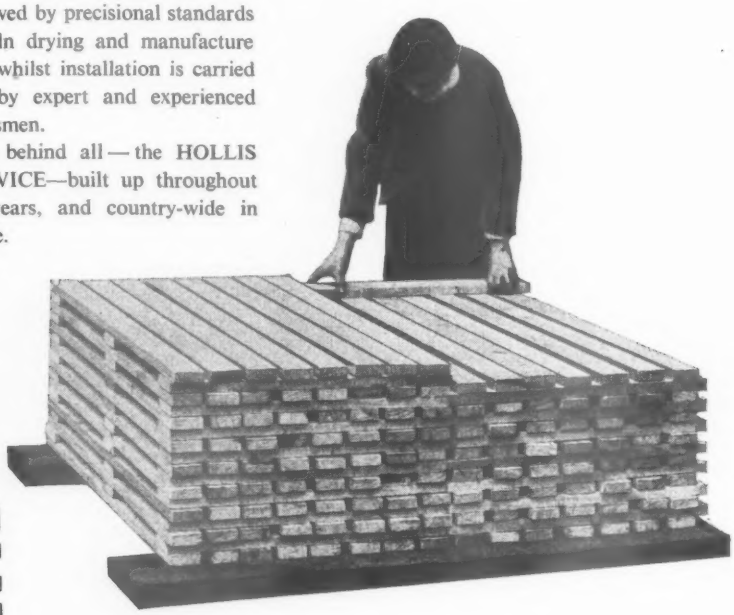

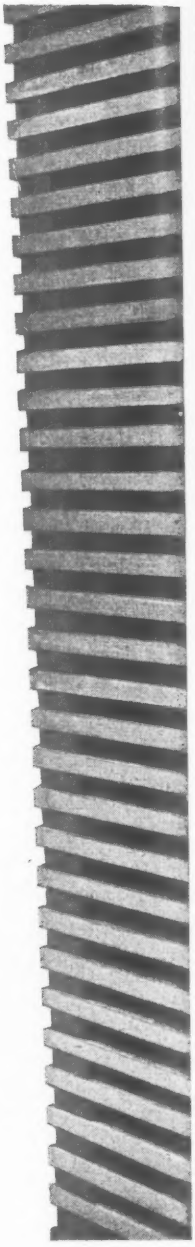

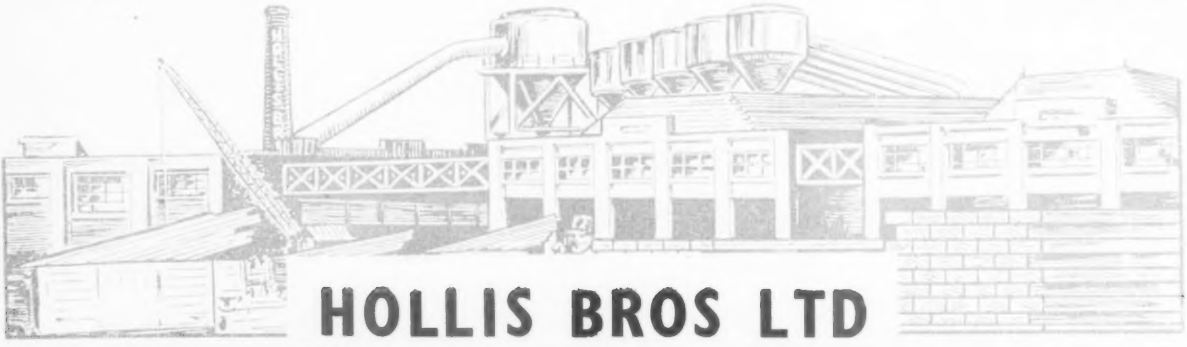

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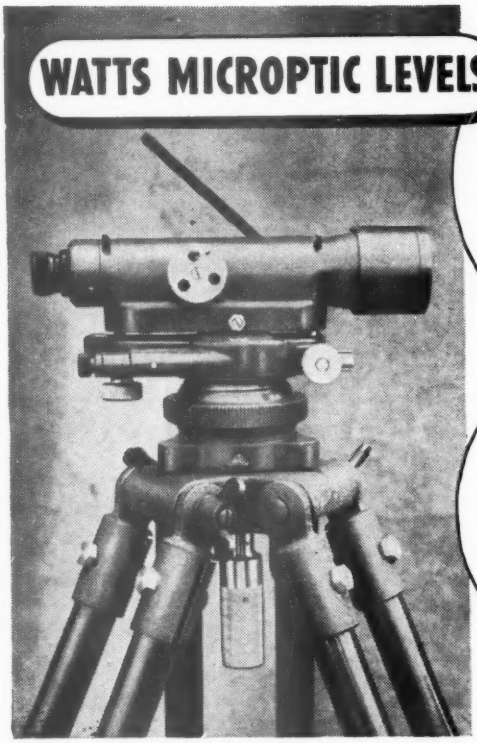

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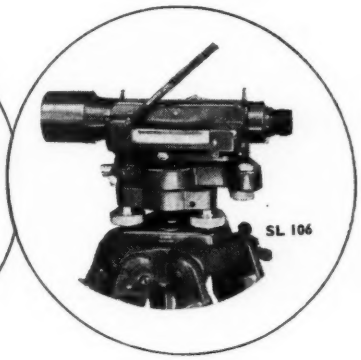

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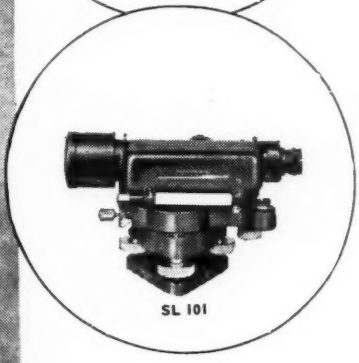

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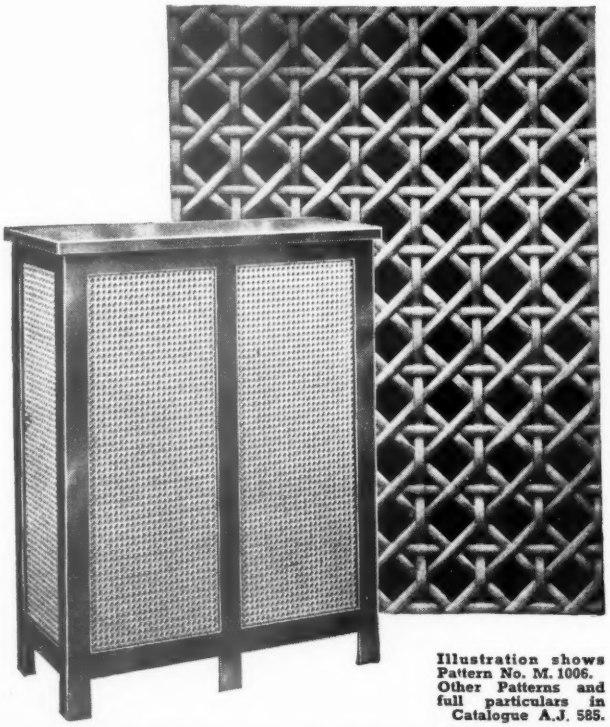

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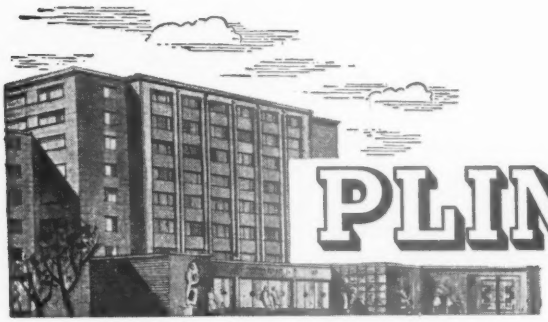

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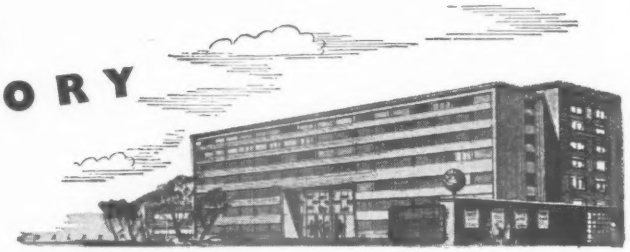

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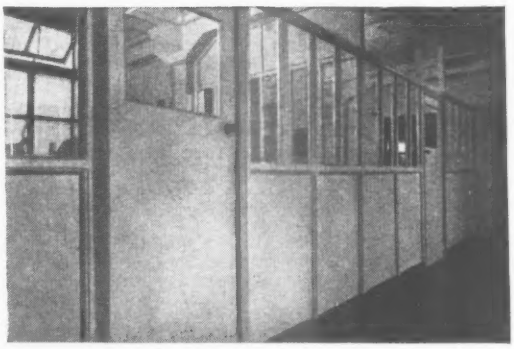

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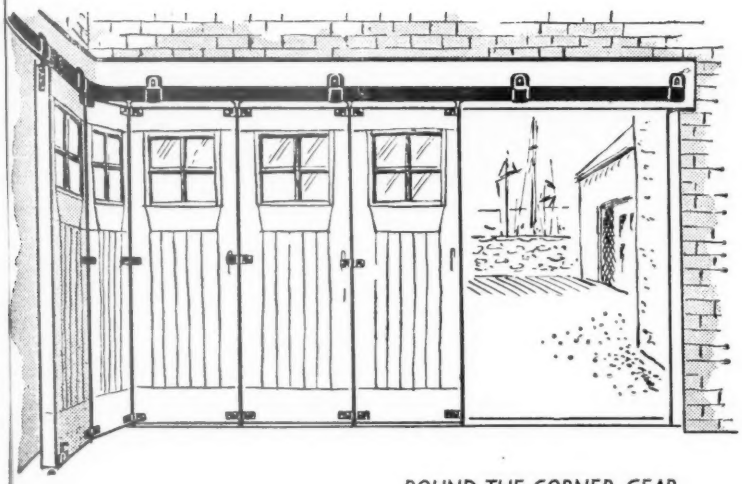

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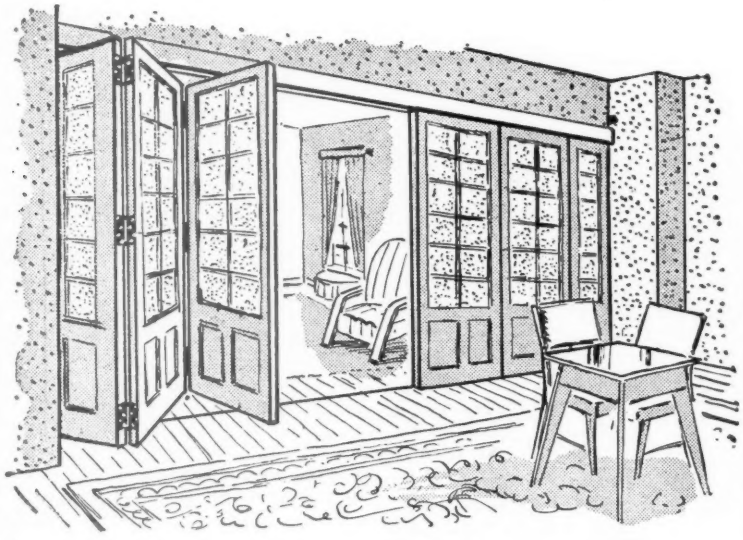

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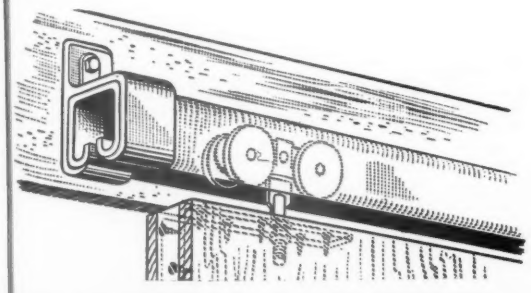

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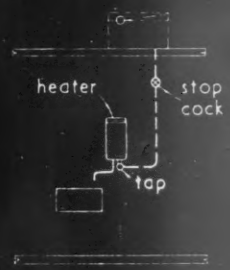

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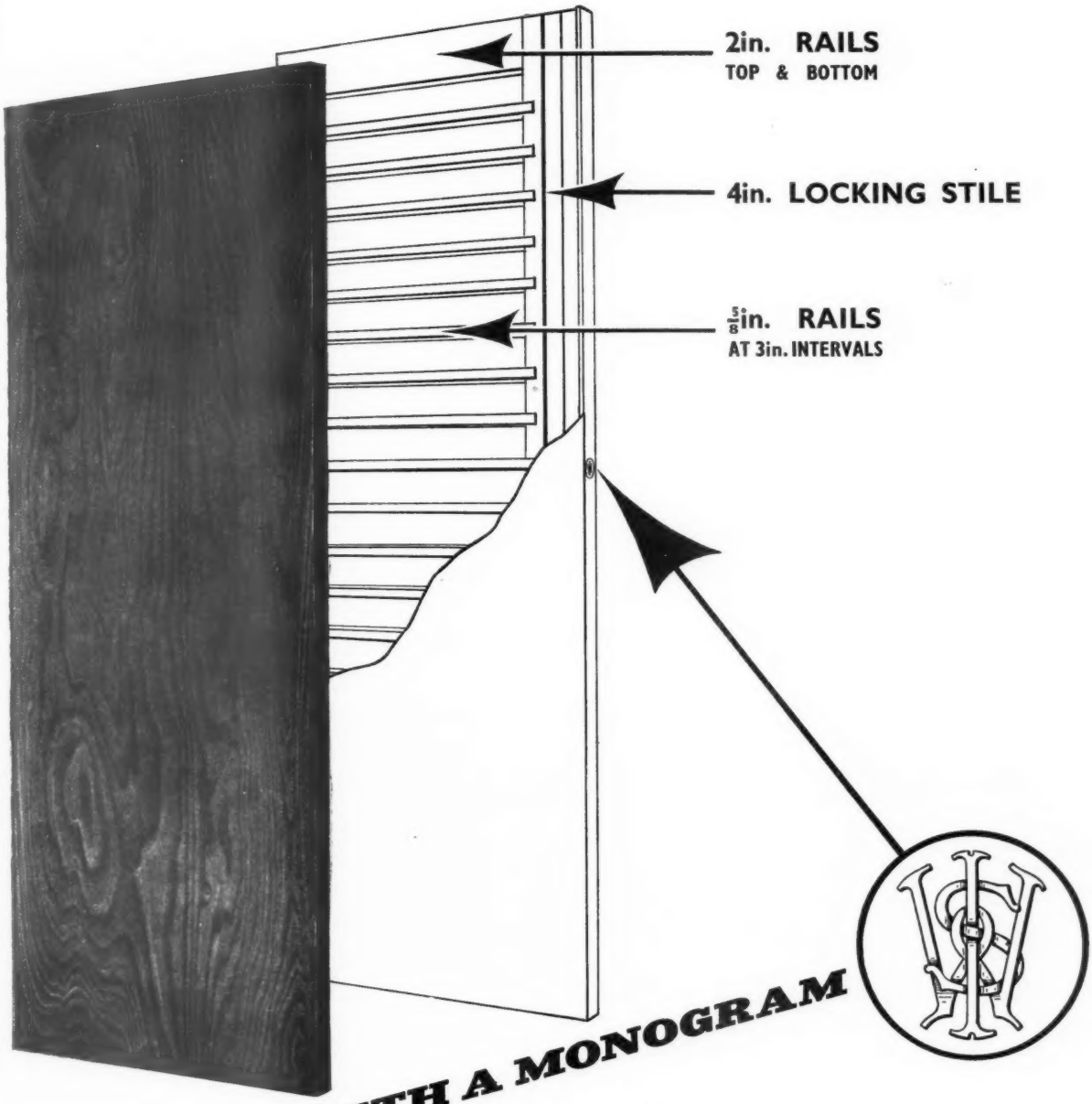

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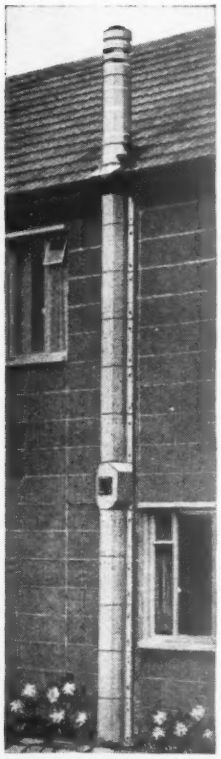

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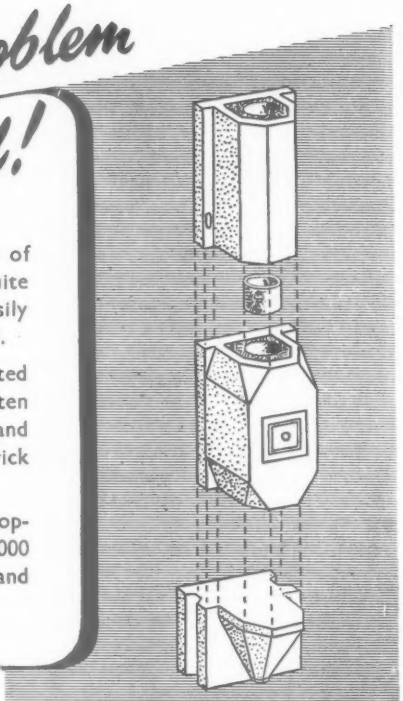

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3 The Lintol has a weir-shaped front and is of sufficient width to afford adequate seating on jambs with all normal fireplace openings. The face of the Lintol is recessed to provide an insulation space at the back of the fireplace surround.

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Where to go for information about Gas

If you are considering the use of Gas, however tentatively, your first move should be to get in touch with the Gas Undertaking serving the area in which the job is situated. Through it you have access to the combined technical resources of the entire Gas Industry. The following list gives the addresses and telephone numbers of the Area Boards. Where there is any uncertainty as to which Area Board is concerned, The Gas Council will be pleased to give you the correct address.

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NORTHERN GAS BOARD: 30, Grainger Street, Newcastle-upon-Tyne, 1. Newcastle-upon-Tyne 26101.
NORTH WESTERN GAS BOARD: Bridgewater House, 60, Whitworth Street, Manchester, 1. Manchester Central 8121.
NORTH EASTERN GAS BOARD: Bridge Street, Leeds, 2. Leeds 32571/8.
EAST MIDLANDS GAS BOARD: Beverley House, University Road, Leicester. Leicester 23201/5.
WEST MIDLANDS GAS BOARD: 6, Augustus Road, Edgbaston, Birmingham, 15. Edgbaston 3616.
WALES GAS BOARD: 1 and 2, Windsor Place, Cardiff. Cardiff 28621.
EASTERN GAS BOARD: 2, The Abbey Garden, London, S.W.1. Trafalgar 5373/7.
NORTH THAMES GAS BOARD: 30, Kensington Church Street, London, W.8. Western 8141.
SOUTH EASTERN GAS BOARD: Katharine Street, Croydon, Surrey. Croydon 4466.
SOUTHERN GAS BOARD: 164, Above Bar, Southampton. Southampton 76362.
SOUTH WESTERN GAS BOARD: 9a, Quiet Street, Bath. Bath 60411/5.

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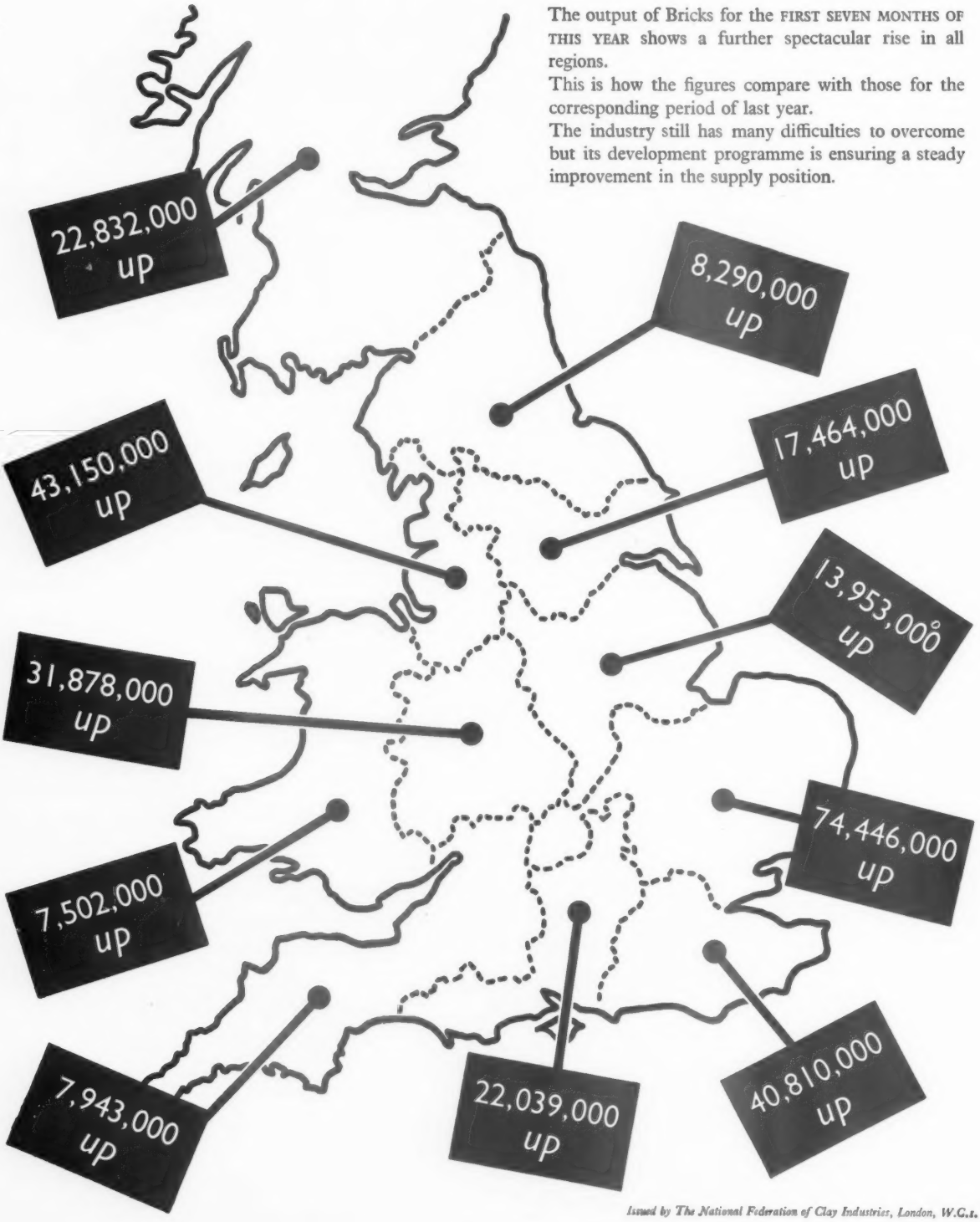

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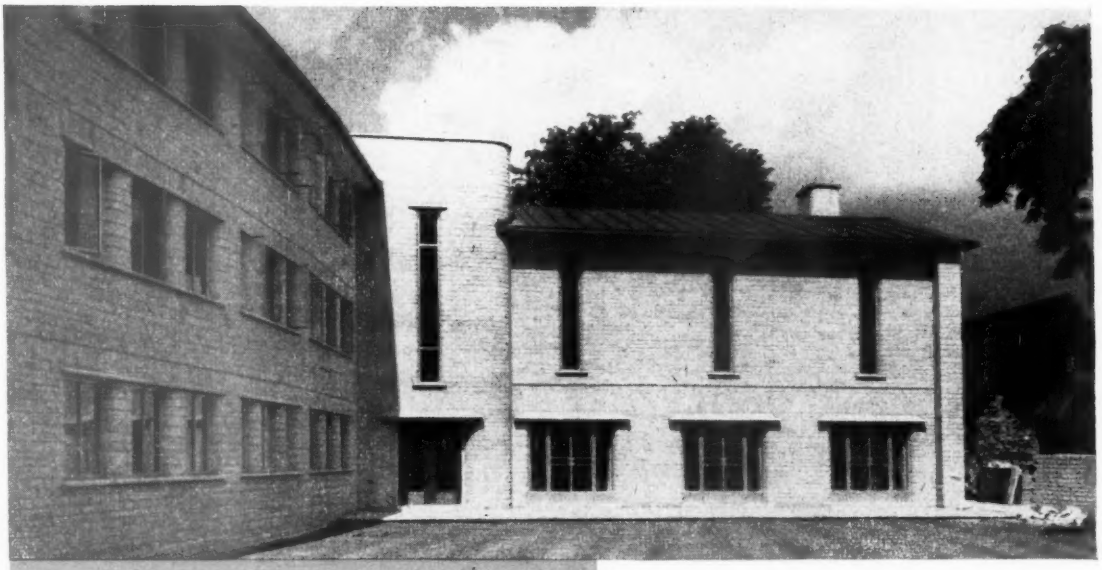

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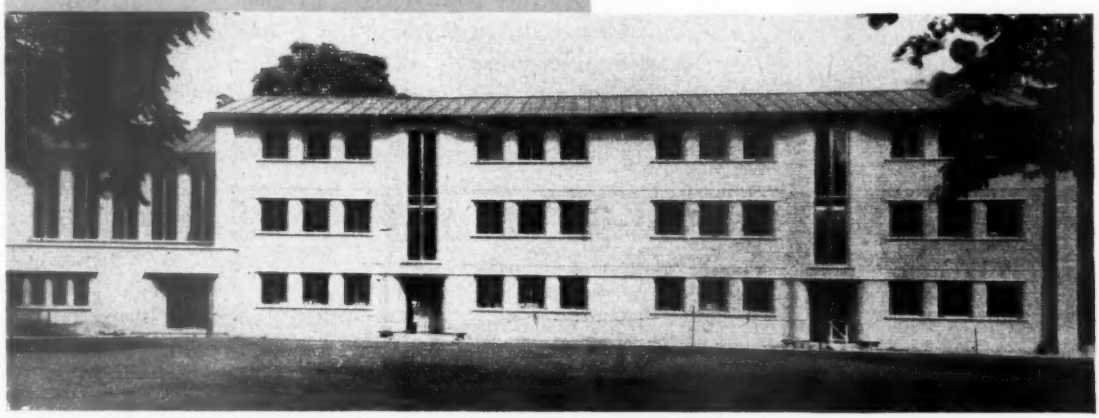

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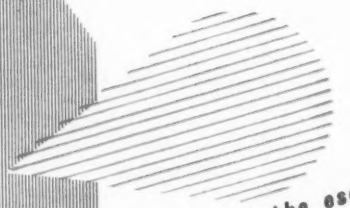
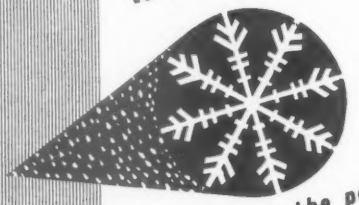
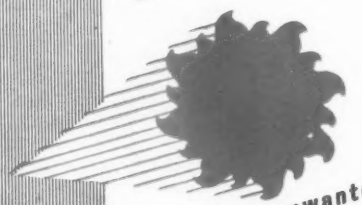


to prevent the escape of internal heat



to eliminate the penetration of exterior cold



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★ The Ministry of Education has applied the name "Archrome" to the new colour range and has included much valuable data about it in their Building Bulletin No. 9 (Colour in School Buildings).

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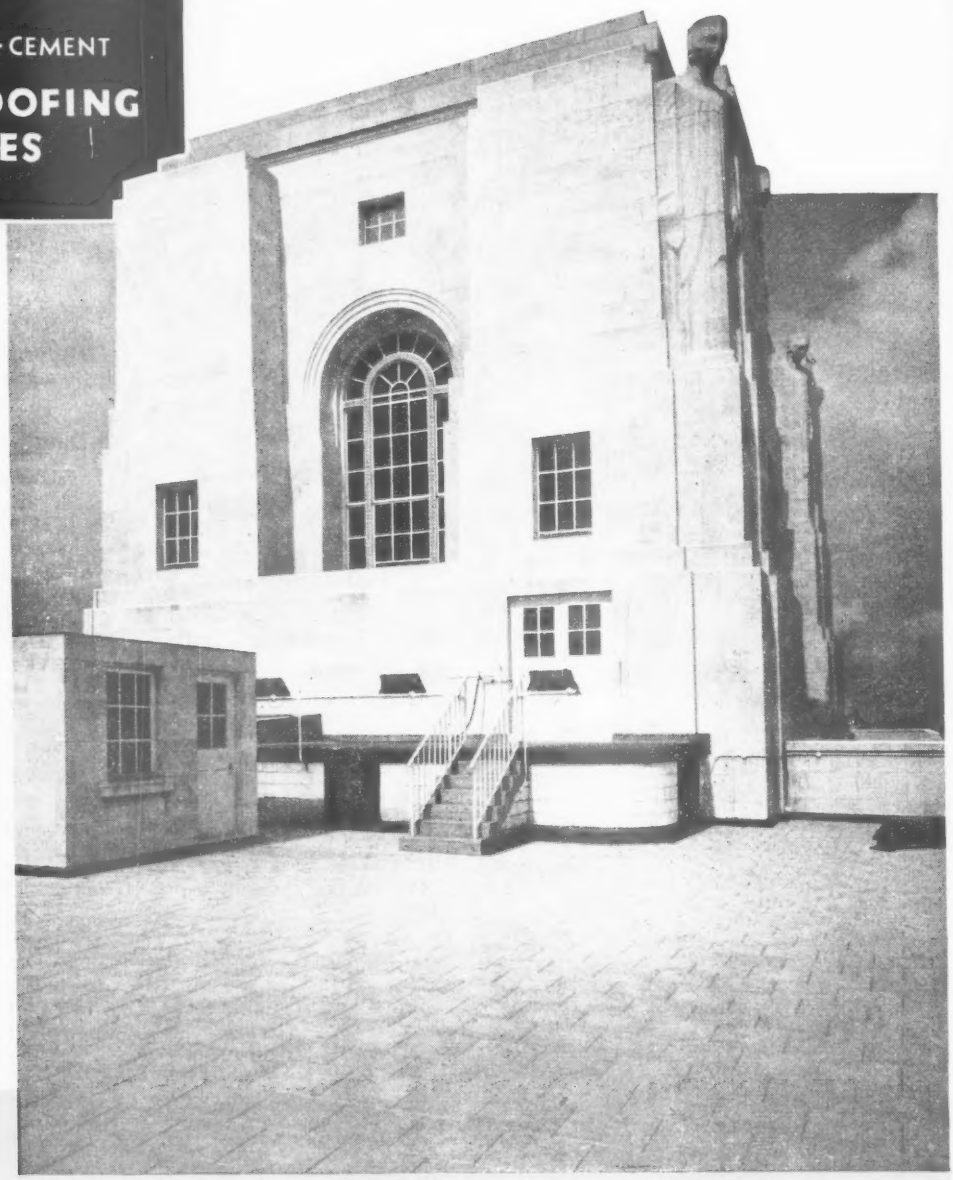

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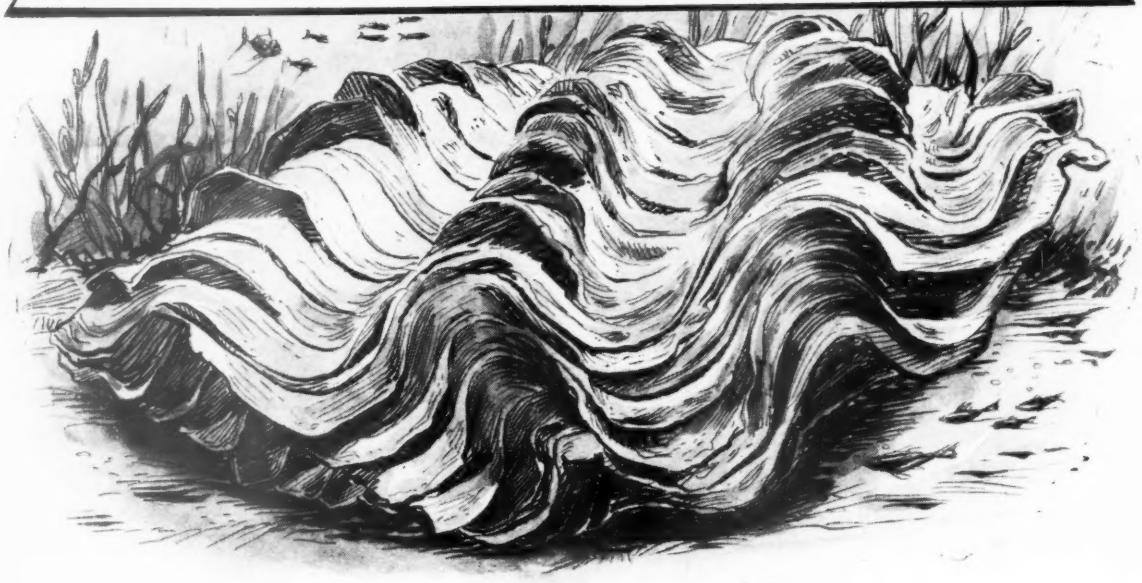

No. 5. GIANT CLAM

Weight 507 lbs. Length 4ft. 6in. These details of a clam's weight and length seem fantastic to most of us, who know only the comparatively small clams found in and around Great Britain. These massive proportions have been reached, however, by a clam found in Australian waters. No wonder such creatures are called *Giant* Clams.

The animal which has to support the huge weight of the shell weighs only 25 lbs. at the most, but the Giant Clam rarely carries its house around. Usually it remains anchored to one spot all its life, devoting its energies to building its home.

A fleshy skin, known as the mantle, covers the animal, and from special glands in this mantle a liquid is emitted which hardens in the water and forms the shell. The clam is entirely responsible for the production, shape, further growth and repair of its shell. It is its own architect and builder.

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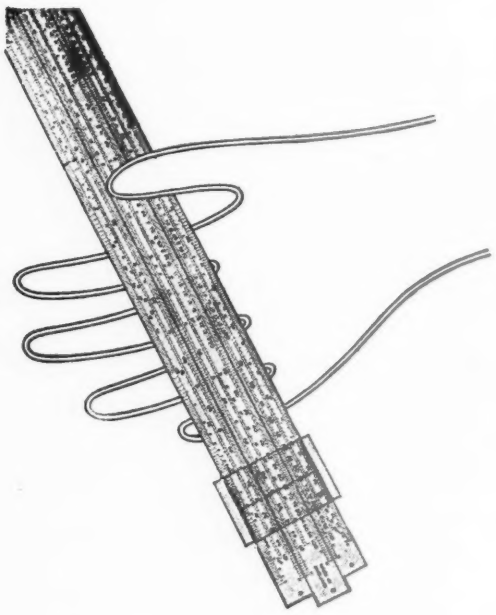

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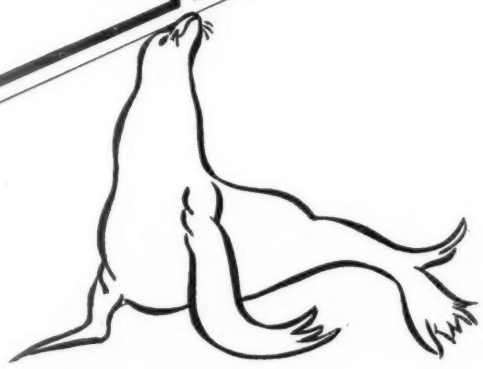

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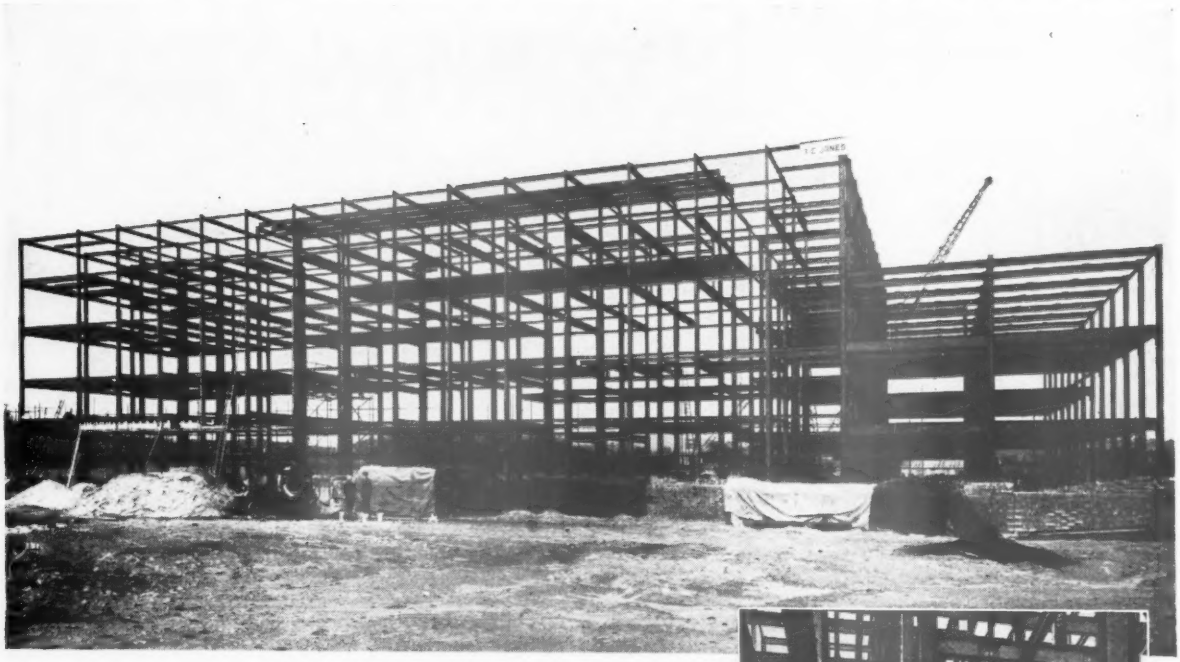

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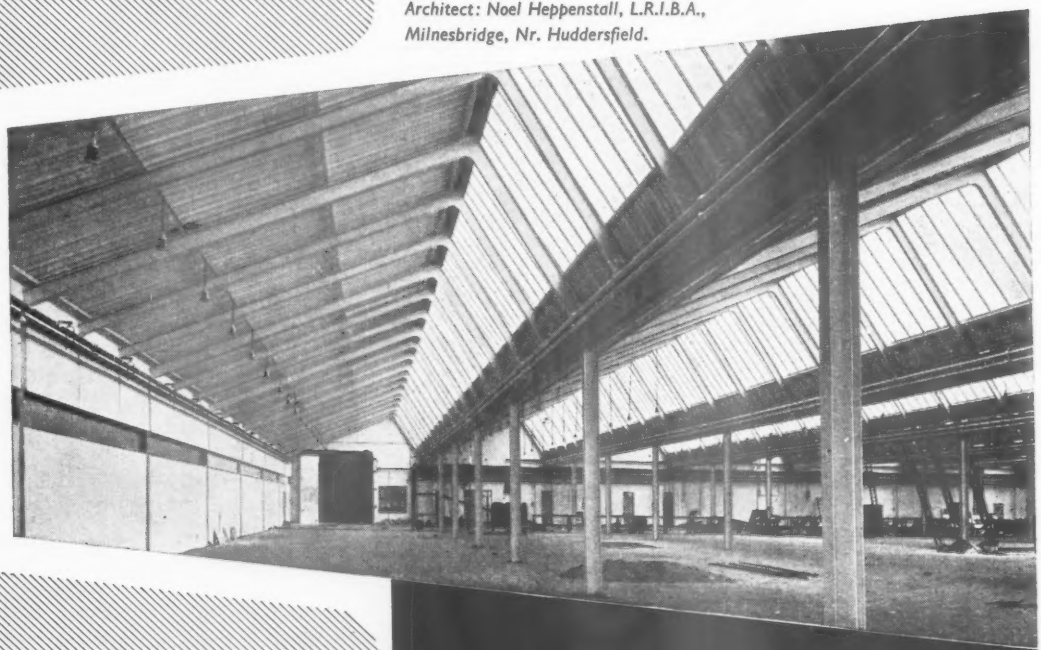

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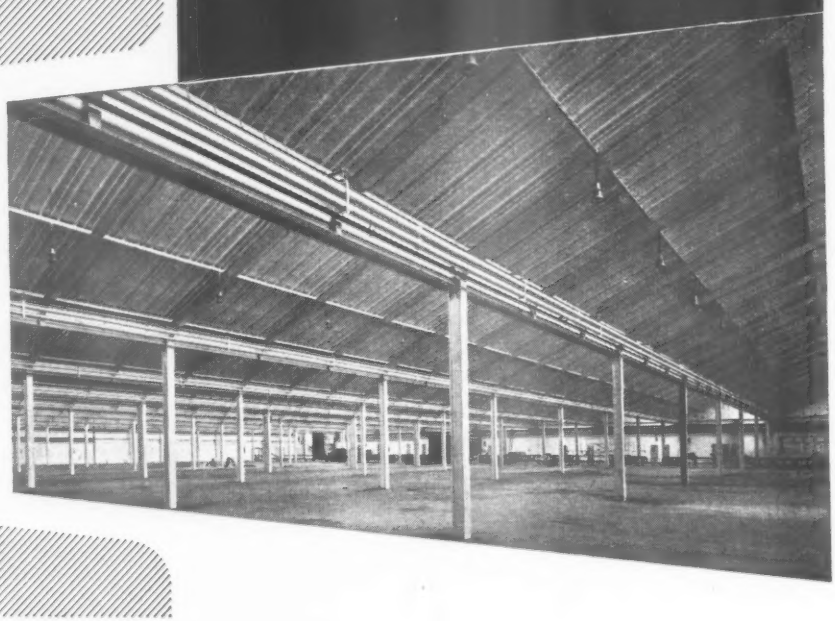

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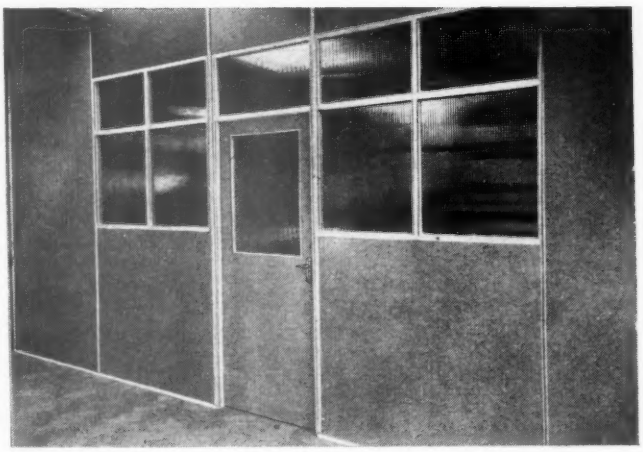

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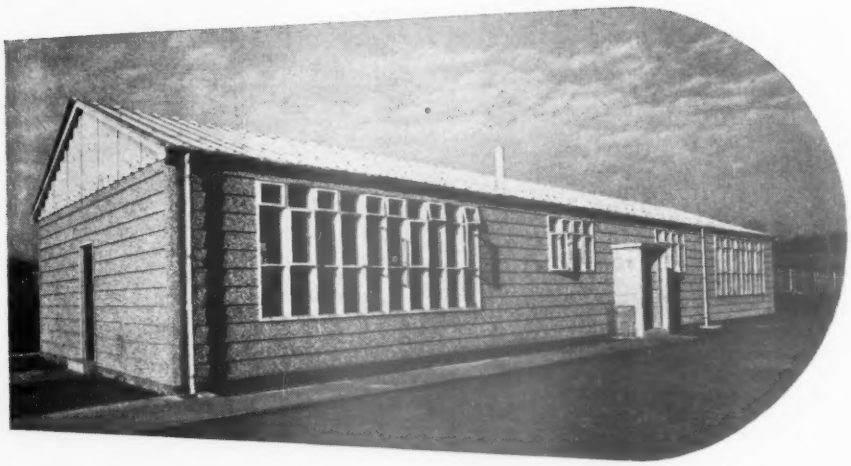

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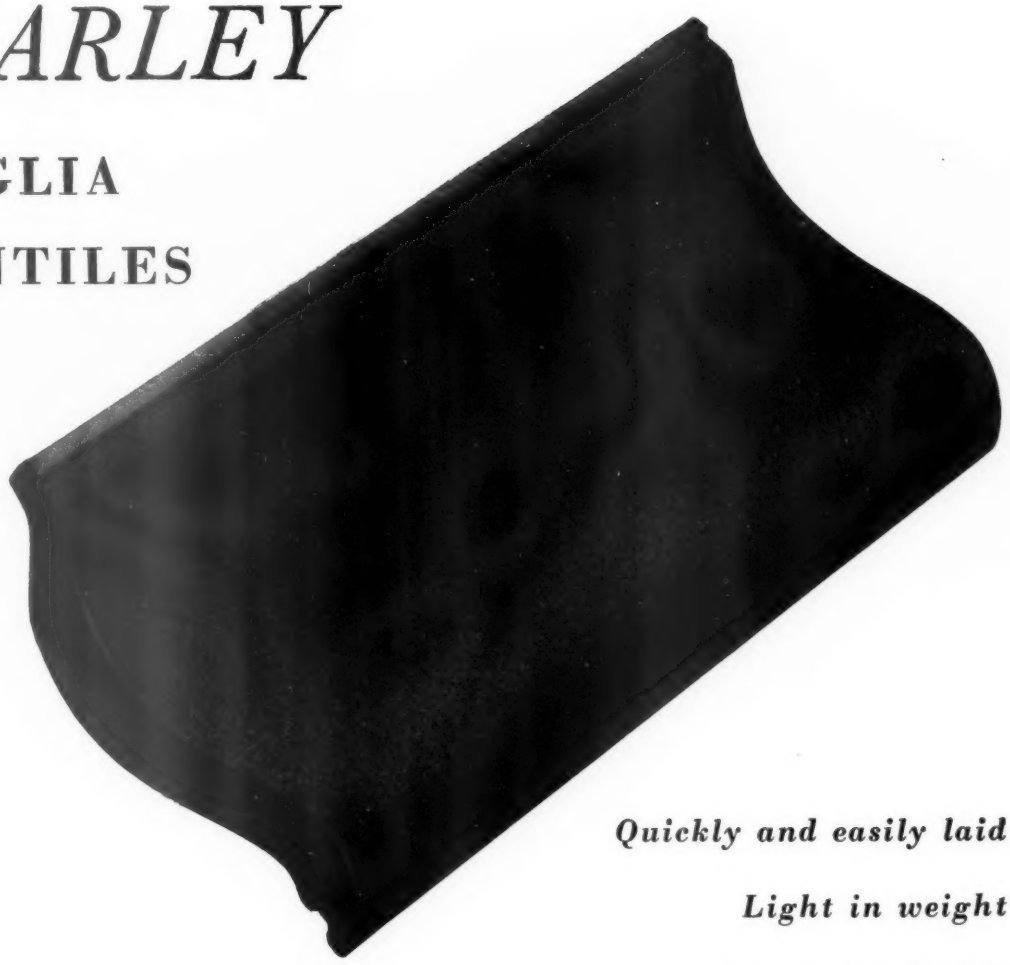

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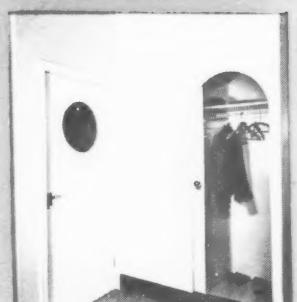

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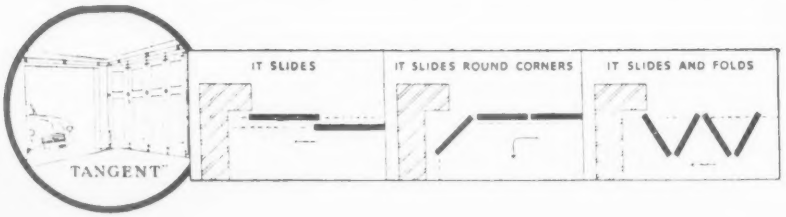

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THE ARCHITECTS' JOURNAL

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CHRISTMAS THOUGHT FOR RIBA

One of ASTRAGAL'S travelling spies returned last week with a rose between his teeth—(was it imagination or were they all suddenly gleaming like the Assyrian's cohorts in silver and gold?)—and a patent leather hat to report upon conditions in the Iberian Peninsula, where it appears the hotel building business is booming fine.

*

In conversation with a local architect this spy learned one thing new—that architects do not assess, nor claim, fees direct from the client. All this ungentlemanly business is done through the local architectural association. Plans are sent to them; they assess the right fee and collect it from the client. It seems to work well enough and has the advantage that the architect (like an author who directs you to his agent) can wave the coarse question of fees airily aside, and thus keep the conversation with his client upon a suitably elevated basis. Passed to the RIBA Professional Practice Committee for a Christmas thought.

SAD FOR THE NIGHTINGALE

After remaining apparently dormant for some months the scheme for building underground car-parks in London's major squares seems once again to be on the move with Berkeley Square—it is rumoured—as the first victim though so far matters have only reached the stage of the digging of trial holes.

*

ASTRAGAL must desert his fence and declare himself implacably against this project. Agreed, traffic congestion in Central London is desperate. Agreed, there is no room, it seems, for a single car more to park. Agreed, too, that many policemen are diverted from more important tasks to the checking up on obstruction cases. Agreed, experts have talked for months and decided to recommend "under-square" parks. Nevertheless, ASTRAGAL believes this "under-square" project to be wrong, partly because it only toys with the problem—*i.e.*, a few more cars will be housed and that number more will be brought in—and partly because the "experts" were presumably "parking experts," not people required to have eyes to see with. Transport authorities are not usually renowned for visual sensitivity—why should they be?—and to them Berkeley Square with tiny trees instead of giant ones—surely inevitably the result of cellar garages?—is the most trivial of alterations.

*

Actually, of course, it is a fundamental change of scale. The monster trees of London's squares are an *essential* part of the scene, and no amount of flowering cherries will replace them.

*

One tiny concession. If that extra parking space would, in fact, make a worth while contribution to the problem, why not gravel (or granite-sett) over the square and let cars park beneath and among the trees—with a few Stockholm flower-pots to replace the flower beds? That would be visually tolerable—and might indeed be preferable to any other form of municipal tinkering.

NICELY ILLUSTRATED

Nicely timed for the festive season come two books on furniture and decoration, a festive season theme, and both are nicely illustrated with photographs. David Joel's *Adventure of British Furniture** gives a sweeping survey from William Morris to the present day, and has the great advantage of having been written from the inside of the history it describes. ASTRAGAL'S only quarrel with what seems to him an otherwise valuable book is the word "adventure" in the title, for if there is one thing British furniture hardly ever is, that thing is adventurous, and at just those points where it so forgets itself as to become daring, as in the Mackintosh-Art Nouveau period and in the Breuer-

* Published by Benn at 3 gns.

HOPE'S

HOT-DIP GALVANIZED WINDOWS

installed in the new
Car Ferry Terminal Buildings
DOVER HARBOUR
(*J. M. Wilson, H. C. Mason & Partners, Chartered Architects*)

after this stern Corrosion Test:

A standard hot-dip galvanized window and sub-frame were fixed to Dover Harbour wall on 22nd September, 1950, and were not removed until 10th October, 1951. Although submerged by high tides twice daily for more than 12 months, neither window nor sub-frame showed any sign of rust.

HENRY HOPE & SONS LTD
SMETHWICK, BIRMINGHAM & 17 BERNERS ST., LONDON, W.1

The picture on the right was taken inside the middle house above. For the explanation see ASTRAGAL'S *note,* "*Emily Loves Marble.*"

Functionalist epoch, the author comes over a bit stuffy and looks the other way.

*

The other book, Bruce Allsopp's *Decoration and Furniture** is, as I have said, nicely illustrated with photographs, but is ruined, as far as ASTRAGAL is concerned, by the line drawings, some of them full-pages, in a kind of debased-Emett or sub-Lancaster idiom. The text is full of good sense and instruction, and should be very useful to the student in a design school, so that it seems a pity to spoil the effect with drawings which the author apparently finds witty.

"EMILY LOVES MARBLE"

ASTRAGAL was intrigued to see the *Daily Mirror* devoting a whole page the other day to an article on a small suburban terrace house—not as the setting for murder, espionage, or any of the other delightful things that are news these days, but merely because of its architecture. It appears that this unassuming East Ham house of the 1900's shelters a tiny but fantastic interior (pictures above). Its owner, Mr. Lusignea, started to build it for his crippled wife forty-six years ago, and has been at it ever since, getting up at 4.30 each morning to work on it. One could so easily and so wrongly dismiss such a work of devotion as amateur and naïve—and if it has failed where the Soane museum succeeds in achieving a magical scale in a confined area, perhaps the very fact that one feels moved to compare the two is significant. At first sight the room appears to be rather conservative, even normal; but, if one looks more closely, one can see that it is really fantastic and belongs to the great tradition of amateur architectural fantasies such as the English grottoes.

*

"It is just a bit of fun," said Mr. Lusignea, "just to pass the time away. Emily cannot get out much; it has been our fun, and Emily does love marble."

*

ASTRAGAL hails Mr. Lusignea (dare one suggest that the Latin ring to that name may account for such visual enthusiasm?) as a worthy successor to all the other passionate amateur architects of the past.

DISH-COVER ARCHITECTURE

The recent correspondence in *The Sunday Times* about the external appearance—hideous or handsome according to taste—of the Royal Festival Hall marks, presumably, the end of what may be called the Honeymoon Period that all large examples of "modern architecture" pass through. Indeed the whole life of such a building—from planning to demolition or graceful old age—is not unlike marriage. First the announcement of project and architect in an atmosphere of high hopes tempered, perhaps, with raised eye-brows. Then the wedding (the finished building) when everything looks at its best for the photographers. Then the honeymoon during which even the harshest critics are prepared to give the thing a chance. And finally, judgment and criticism, attack and defence.

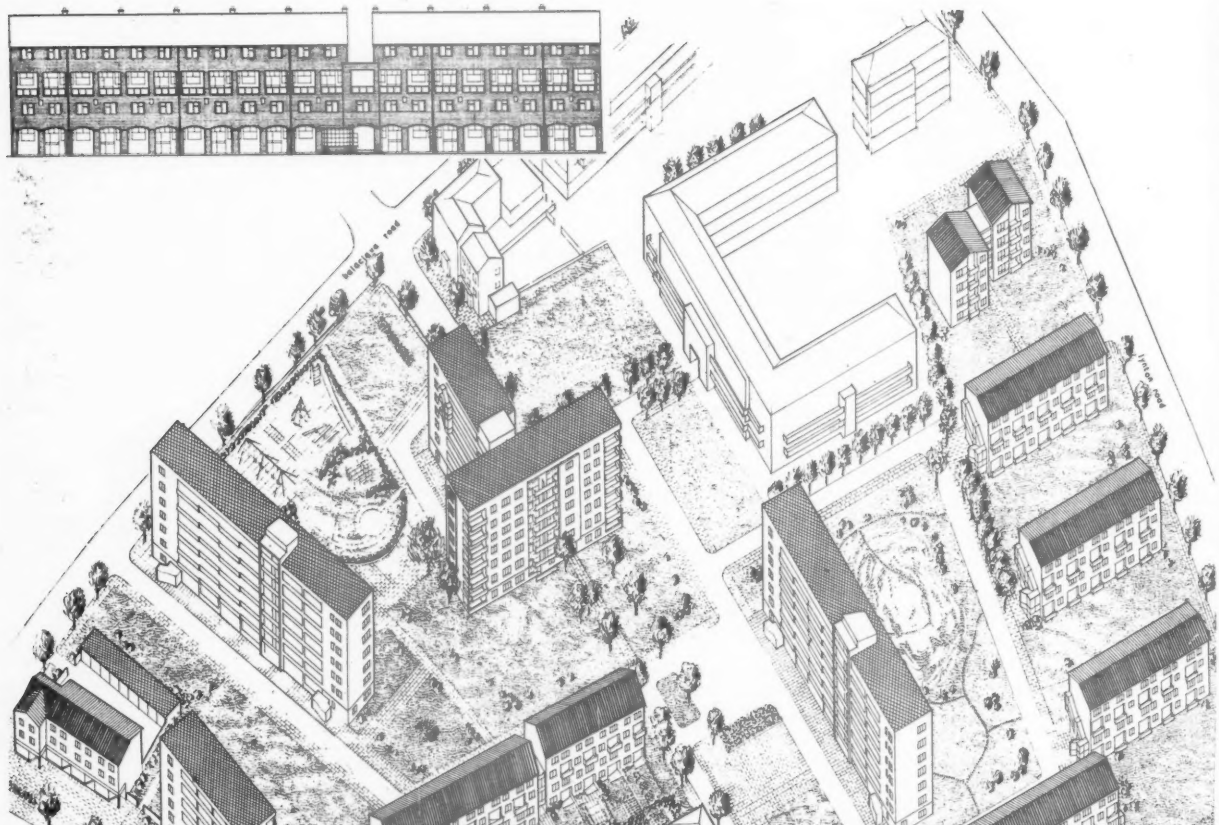
*

There are things about the Festival Hall which many architects probably feel they would have done differently (and possibly the architects responsible feel the same way now). The views most commonly expressed in the profession seem to be:—pro. . . . the triumph of having an adventurous design there at all. Con. . . . disappointment that in certain ways hopes fell short of achievement. Pro. . . . the imaginative conception of the poised auditorium, and the splendid 3-dimensional planning. Con. . . . the broken-back roof line of the auditorium and the fortress-like lack of welcome and grace in the elevation.

*

But everyone will greet with horror one correspondent's suggestion that

*Vol. II, *Principles of Modern Design*, Pitman, 70s.



Not Good Enough?

Bermondsey Borough Council has decided to put its Architects' Department under the Borough Engineer, H. C. Coss. Readers may well wonder why. Is the change due, for instance, to inferior design? The drawing above is of a typical scheme by the Bermondsey Architects' Department, under the Council architect, J. L. Pickering, for maisonnettes and flats under construction at Bermondsey. Not only is the individual design of each building competently handled (note the maisonnette plans in the bottom right corner and maisonnette block elevation, top left), but the layout of the blocks and the variety of building types shows an overall attention to detail, amenity and quality which most of Mr. Pickering's fellow-architects would acknowledge as being very good. What about quantity? MOHLG figures for rehousing to the end of September showed that, of the eight inner South London boroughs, Bermondsey was second only to Lewisham, in terms of new homes per thousand residents, with figures of 15 and 15·3 respectively. However, the Council has agreed on a resolution making the following criticisms: " for some time . . . the production of plans and working drawings has not kept pace with the actual building work . . . the Council Architect . . . has had to encounter certain difficulties that do not obtain in the case of outside architects who . . . are able to deploy staff according to the amount of work . . . in hand. There is no one committee or officer who can exercise a single-minded 'directive' over housing production." So another independent architects' department disappears. This matter is discussed in the leading article on the opposite page.

"facade screens" should be put up round the building to change its architectural character. Nevertheless, ASTRAGAL finds himself—somewhat to his surprise—not completely opposed to the *idea* of such screens for other buildings than the Festival Hall. He has long ago accepted (privately) the view that "interiors" can quite satisfactorily be designed and installed within an existing building . . . as in liners, hotels, restaurants and office blocks. So long as they are well and sympathetically designed they can be quite successful. Is there any reason why, except to the purists, external "devices" should not be periodically hung upon those buildings which are not masterpieces but merely run-of-the-mill statements of 3-dimensional real-estate?

*

Would it not, perhaps, be even rather exciting visually, when space permitted, to erect round a building a second and outer facade placed at different distances from the "real building" and appropriately pierced and modelled—a screen through which even the most boring building could be given a new visual life by a counterplay of solid and void, of shadowy advance and retreat?

*

Dangerous? Immoral? Reactionary? Absurd? Perhaps; let the adjectives fly happily on their way. But let the attacker remember this: that if walls are now no more than screens—as we are so often told—why make them only one-leaf thick if space and cash permit two leaves? (It's worked out quite well with St. Paul's after all.) If we are faced with a boring or ugly building, it is sometimes believed that another and more publicly distinguished architect can save it by fiddling with the elevations (*e.g.*, power stations, Bucklersbury House, etc.). Would it not be better in such cases to drop over a "temporary" pierced dish-cover which could be removed, replaced in revised form or left off completely as current taste decreed?

*

ASTRAGAL is quite serious about all this but he is now going Christmas shopping. No letters will be forwarded. Compliments of the season to you all.

ASTRAGAL

POINTS FROM THIS ISSUE

Another architects **department to disappear** .. pages 772 and 773

Unemployment in the Profession .. .. .. page 774

Reports of **Society Meetings** .. .. page 777

The Editors

REACTION IN BERMONDSEY

" Where architectural staff is contained in the municipal surveyor's department, technical problems which constantly arise on matters of drainage, structural design, planning, etc., can be settled simply by discussion in the one office between sections involved thereby obtaining the fullest flexibility in the use of staff, with resultant increase in output and saving in time and costs." This is one of the arguments put forward by the Institution of Municipal Engineers in a document prepared by them for " the guidance of members who may be required to report to their authorities on a proposal to create a separate architectural department." Most of the other arguments were published in the JOURNAL for January 22.

It is, of course, impossible to tell how successful this document has been in preventing the forming of new architectural departments. Nor can one attribute directly to it such retrograde action as that of the Bermondsey Borough Council's in putting a separate architectural department back under the control of the Borough Engineer (see this week's frontispiece, opposite). But there is no doubt at all that this document is liable to continue to damage the architectural profession and therefore, eventually, the public, if it is still available for use by municipal engineers when they make non-objective reports to ordinary laymen councillors on such issues as the planning of house production.

The municipal engineer's job can be summarised as roads, drains, refuse disposal and street lighting. When local authorities started building, the more enlightened, like Bermondsey in 1929, set up separate architects' departments. They no more expected municipal engineers to design buildings, or organize a building programme, than anyone expected sanitary inspectors to run the health service.

The Bermondsey Council complain that : " there is no one committee or officer who can exercise a single-minded ' directive ' over housing production." If they want single-minded direction on housing it would surely be more logical to appoint the architect who designs it to the post of " Officer in Charge of Housing Production," rather than the engineer who is only responsible for ancillary details.

If standards of design means anything to the councillors, they should be made to realise that the quality of work from their architectural department is bound to fall. Good assistant architects are never anxious to work under an engineer, so

it will become increasingly difficult to fill the architectural department, already short-staffed, apparently, with good assistants.

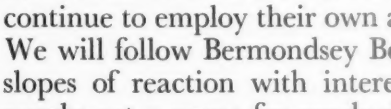
The Council may argue that they intend giving more housing work to outside, or private architectural firms (an unusual example of support for private enterprise on the part of a Labour Council). They point out, rather callously, that "outside architects are able to deploy staff according to the amount of work that they at any one time have in hand."

Even supposing that the Borough Engineer is prepared to see his newly-gained architectural department, and his concomitant responsibilities, thus whittled away, it is debatable whether private architects are more efficient—for the same cost—as public architects. Post-war experience suggests that on large building programmes—as apart from the big individual building—public architects are better placed than private firms to make an economic, quick and efficient job. If local authorities were not convinced of this they would not, surely, continue to employ their own architects.

We will follow Bermondsey Borough Council's slide down the slopes of reaction with interest and some sorrow. They so nearly got a name for producing good architecture.

This week Martyn Webb contributes an article to the JOURNAL'S *series which is showing the results of an enquiry into the state of the profession. (The names shown in the headpiece below were taken at random from the Architect's Register and are not related to the article.)*

FOCUS ON


Bank Bu...
Theodore, Oaken.
Martin Margaret, Sir Edwin C.
Ronald Francis Hedley, Langley-Ta...
Frank John William, 12 Chalcot Road, Regents
Capt. John Freeman, County Architect's Dept., Co
Albert Edward, 54 Shirley Avenue, Leicester.
Bernard, 1/11 Hayhill, Berkeley Square, London.
Hugh Andrew, Descons Hill, Hastoe, Tring, Herts. 1933.
Jack Brunnar, 36 Great Ormond Street, London, W.C.1. 1934
Kenneth Gilbert, 41 Victoria Avenue, Surbiton, Surrey. 195
Albert Edward, "Rosberville," Grosvenor Road,
Donald Albert, Regional Hospital Board,
Ernst, 69-70 Piccadilly, London, W.1.
David Philip, 1 Torrington Place,
Donald Peter Millican, Dolcis,
Joseph, 49 Rowsley Avenue,

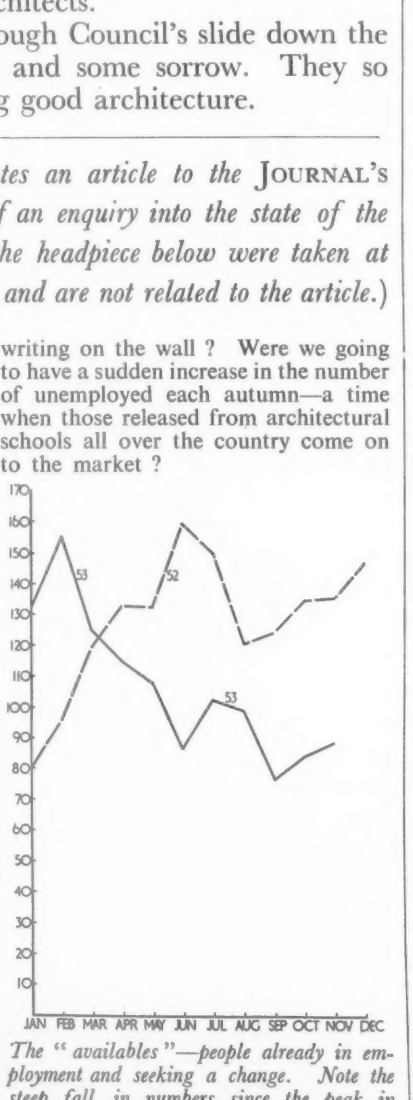
YOU

MARTYN WEBB

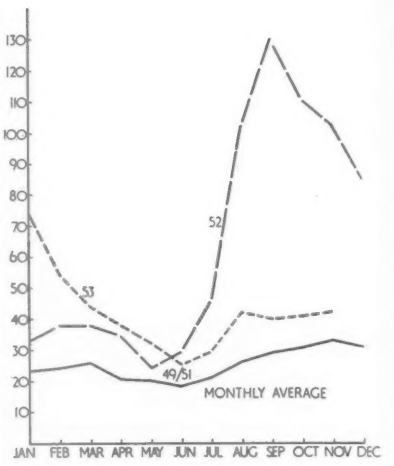
Facts About Unemployment

IN two articles published in April and May of this year, we showed that unemployment figures during 1952 had been high; and that at their peak they were more than five times the monthly average number of people unemployed during the years 1949-51. However, at the time the articles were written there was a steep decline in unemployment.

The articles raised two questions: in view of (*a*) the continued large output from the schools, and (*b*) the continued growth of the profession, were the events of 1952 to be taken for signs of the writing on the wall? Were we going to have a sudden increase in the number of unemployed each autumn—a time when those released from architectural schools all over the country come on to the market?

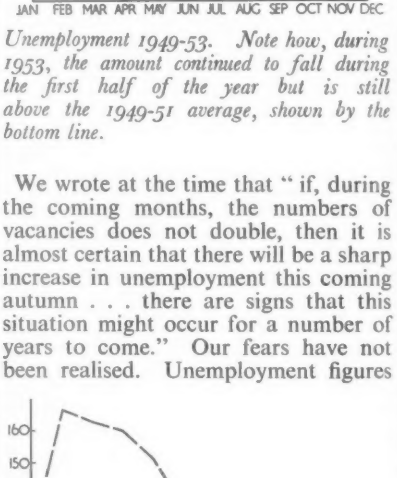


The "availables"—people already in employment and seeking a change. Note the steep fall in numbers since the peak in February, 1953, and the low level as compared with 1952.



Unemployment 1949-53. Note how, during 1953, the amount continued to fall during the first half of the year but is still above the 1949-51 average, shown by the bottom line.

We wrote at the time that "if, during the coming months, the numbers of vacancies does not double, then it is almost certain that there will be a sharp increase in unemployment this coming autumn . . . there are signs that this situation might occur for a number of years to come." Our fears have not been realised. Unemployment figures



Graph showing vacancies.

continued to get smaller during the first half of this year, and in the second half they have been considerably smaller than they were last year. There has been no comparable autumnal rise in the unemployment figures.

DEMAND AND SUPPLY

However, a closer inspection of the data leaves no grounds for complacency. In order to examine our figures more closely, we may conveniently divide our data into two basic groups; those

of " supply " and those of " demand "; the two corresponding broadly to (*a*) the numbers offering themselves for employment and to (*b*) the total number of vacancies. Ideally, of course, the two should equate, leaving no unemployment, but since the war the architectural profession has had either too few vacancies (as in 1952 when there was a big upward surge in unemployment), or too few architects (as in 1949 when there was something like one and a half times more vacancies than people to fill them).

In the graphs on page 774 we try to show the most important data in a convenient form.

The " supply " is made up of two kinds of people—the unemployed and those in employment who are seeking either a change or improved conditions. Since those in employment must possess practical experience, while those who are unemployed have often to contend not only with unemployment but with lack of experience, we must consider the " available " architects, as they are officially called, to be strong competitors for employment.

The graphs show the *average* data for the years 1949/51 and the *actual* data for 1952 and 1953. It can be seen that, although the total supply of unemployed labour has fallen considerably this year, it is still somewhat higher than the four years' average. Why is this ? There has been a fall in the number of unemployed; in September of this year there were only 40 persons so classified, as compared with 130 in September, 1952. In addition, *and this is perhaps most significant*, there has been a remarkable fall in the numbers of available architects. In no one month from April, 1953, were there as many available architects as in 1952; in other words, the unemployed in 1953 had far less competition to fear from those already in employment (who wanted to change their jobs) than did their less fortunate brethren in the previous year.

The demand for architects has increased turing the past few months ; for the first 11 months of this year the average number of outstanding vacancies was 64, compared with 51 for a similar period in 1952. We can therefore assume that, while some of the improvement in prospects was achieved through an increase in the numbers of vacancies, most of it arose out of a drop in the numbers of " available " architects.

AN UNSATISFACTORY POSITION

In looking at these figures we must confess to a certain amount of uneasiness as to the real prospects, for although the number of vacancies has shown an increase over last year, the totals do not compare at all favourably with those for previous years and are still well below the average for 1949-51. True, we could conclude that the earlier figures relate to the immediate post-war period of expansion of offices, whereas the present data apply to a period of consolidation and of replacement only. If that is true, what about those students who graduate in the coming years? —for at present the rate of entry into the profession is more than twice the annual wastage from all causes.

We must also feel uncertainty as to what factors influence architects to move from one job to another. We cannot congratulate ourselves on a *real* improvement in professional prospects since an increase in vacancies was not the sole cause of the decrease in unemployment. The unemployed were more able to find posts because competition was reduced by a fall in the numbers of " available " architects.

Here, of course, we may speculate. Have those who were so vocal in their desire " to get out of public offices " suddenly decided to stay, or have those who complained of low salaries in private offices had their stipends increased ? We cannot say ; probably the unemployment problem of 1952 was something of a shock to those who had grown accustomed to frequent moves in search of the perfect office. 1952 may have shown them the value of an appointment in hand. If the reduction in the number " available " is only temporary, then the uncertainty remains. For if the chances of obtaining a job for the truly unemployed are conditioned, not so much by the number of vacancies, but by the number of employed who think they would " like a change," then almost anything can happen—at least as far as forecasting trends are concerned.

WHAT OF THE FUTURE ?

Professor Bowen, in his article on the volume of building, published in the JOURNAL on November 5, showed that during 1952 the volume of building, at constant prices, reached a post-war peak at £725 millions. Although we cannot say how much of this building work had been assigned in the years previous to 1952, it is interesting to note that in that year unemployment among architects rose sharply ! It is possible that during 1953 the volume of new building may have exceeded the figure for 1952, yet unemployment has declined. What then are we to conclude?

The answer lies not so much with what is *in fact* happening, but with what the industry or profession *thinks* is happening. This is understandable, since statistics become available only some time after the event. The trouble in 1952 may, therefore, have stemmed from events in 1951, when the total volume of building fell as compared with 1950 : £661 m. as against £687 m. Offices anticipated, quite logically, a similar fall in 1952, and they either reduced staff or cut down future estimates.

Thus, we might explain this year's experience in terms of a happy combination of buoyancy on the part of heads and principals who, on the basis of 1952's high level of activity, demanded more assistants ; and despondency on the part of assistants already in employment, who as a result of the sharp rise in unemployment during 1952, decided that they would stay put and not register as being " available."

Our forecast might appear, therefore, to be influenced by three basic factors :

(i) The volume of building, keeping in mind that its effect upon employment occurs some time after a change in volume.

(ii) The number of new architects appearing on the market is likely, as we have seen, to remain fairly high for some time to come.

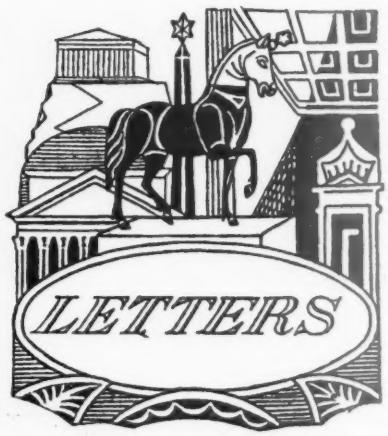
(iii) The number of architects likely to seek a change of employment. Since these appear to react, subject to a time-lag, to the level of true unemployment, which itself lags behind the fall in the volume of building, this factor is a most uncertain one.

INCREASE IN UNEMPLOYMENT

If we conclude that offices are, during the coming months, going to be encouraged by 1953's activity, then unemployment will continue to be low, *provided* employed architects continue to be depressed about their prospects. But it seems likely that the current low figure of unemployment may induce an increase in inter-office movement among the employed which, if it occurs at the time when architectural schools are sending their successful pupils into the world, is likely to lead to an increase in unemployment.

This conclusion is unsatisfactory, but with the tools which our present system provides, little more can be accomplished. What we *can* say, as far as unemployment is concerned, is that the problem is not a simple relationship between the volume of building and the demands for architects. The effects of a change in the volume of building are interpreted by employers in terms of the productivity of their assistants, and by assistants themselves in the chances of getting a job.

Here we must turn our thoughts to the annual output of trained architects by offices and schools which, fostered by conditions which occurred at least five years ago, flows on. If 1952-53 showed us anything, it was that if the employers' reaction to the fall in the volume of building during 1951, and the response of assistants in 1953 to a sharp increase in unemployment in the previous year, are likely responses to similar occurrences in the future, then we can see that the profession is likely to show marked responses to comparatively minor fluctuations in building activity.



Ian Bowen, Professor of Economics, Hull University.

T. E. Allbeury

D. G. Dearden, *A.R.I.B.A.*

Robert Maxwell, *A.R.I.B.A.*

Basil Ward, *F.R.I.B.A.*
Lethaby Professor, Royal College of Art.

Houses—The Next Step

I agree with part of Mr. Harvey's first paragraph (Dec. 10), namely that some money will be spent by prudent landlords to prevent sub-standard houses from becoming entirely useless, and I agree that this is one of the points in favour of the government proposals. What I intended to question in my article was, whether the proposals went far enough to justify the claim that they would suffice to preserve the national asset, *i.e.* the major part of the 7¼ million houses owned by private landlords and not due for demolition or conversion in the near future.

I did not deal in my article with the proposal to raise the permitted return of landlords' money from 6 to 8 per cent. It would take too long to discuss here the proposals on improvements and conversions. Again the government has, in my view, made a step in the right direction, but it seems doubtful whether sufficient property owners will be encouraged to make use of these proposals so long as building costs are as high as they are at present. The risk from the property owner's point of view is that, with the conditions laid down, he may incur some capital loss in carrying out any substantial improvement.

IAN BOWEN.

Hull.

SIR,—Although the calculations in Professor Bowen's article on the government White Paper "Houses—the Next Step" were of considerable interest, surely his commentary that—"There is certainly little hope of landlords finding it feasible to make wholesale modernizations and redecorations of old properties on the strength of the government's proposals" is a non-sequitur.

That section of the White Paper on which Professor Bowen's calculations are based is concerned with repairs only. The "modernization" that he refers to is dealt with under the heading of "Improvements and Conversions" and an entirely different set of financial encouragements is proposed. The government proposes that half the cost of providing amenities, like fixed baths and hot water for domestic washing purposes, should be borne by the local authority, and that the landlord may increase the annual rental by 8 per cent. of the half which he pays. It seems likely that one of the main reasons which could deter the small property owner from providing these amenities is a psychological atmosphere that infers that it's not worth doing. It would be most unfortunate if Professor Bowen's comment was accepted at face value in conjunction with his calculations when they are only part of the story. Has Professor Bowen studied the results of the Croydon Experiment and the Stockton Test?

Do not let us say anything that may condemn these hundreds of thousands of families to live on without amenities in these houses without giving all the facts and figures. The small landlord or his adviser are unlikely to base their decisions on the EDC report, but they may well be influenced by Professor Bowen's comment not realising that it is only half the story.

T. E. ALLBEURY.

Surrey.

Ian Bowen writes:

The main point raised by Mr. Allbeury has already been dealt with in the answer given to Mr. Harvey's letter.

In the answer and in my original article I made it clear that I thought the government's proposal to be courageous. I pointed out that a similar problem arose because of the discrepancies between the movements in rents and building costs in many European countries. I would not, for a moment, wish to suggest that my necessarily brief and rough calculations in a column and a half of comment, might be taken as representing a full analysis of all the facts and figures. Nor does it seem likely to me that "psychological atmosphere" will determine what small property owners do to renovate their property—they will surely be guided by the ratio between returns and outlay.

A film of the Stockton test was recently shown in Hull and some literature distributed on it. My impression of this test was that it served to confirm rather than to allay the fears expressed in my article. To begin with, the method followed in the Stockton experiment would not conform with the byelaws of most authorities, nor, for many reasons which cannot be entered upon here, could the byelaws easily be amended wholesale. So far as most old housing properties are concerned, those lacking fixed baths and hot water for domestic washing purposes are usually of a character such that even on the basis of receiving 50 per cent. of assistance, the landlord would find it difficult to justify to himself the necessary expenditure, especially if he has arrears of repairs to make good. Surely this is a fact which has to be squarely faced. Ineffective legislation, as has been shown by the 1949 Housing Act, is worse than useless to the thousands of families living without amenities.

The present legislation will almost certainly yield some useful results in some localities, but it seems likely to be deficient as a remedy for the major part of the slums of industrial England. This is still my view, although I am open to conviction to the contrary.

The Hong Kong School

SIR,—Having first-hand acquaintance with the School of Architecture at Hong Kong University, I am in a position strongly to support ASTRAGAL'S comments on the refusal by the RIBA to grant recognition up to Intermediate level (A.J. November 5). It is known that the two eminent representatives of the RIBA who made the on-the-spot investigation were impressed. Indeed, anyone familiar with schools of architecture could hardly fail to be impressed by the exhibition of students' work. The advanced standard of many of the drawings by third-year students would cause eye-brows to be raised in fourth-year studios in this country.

It was hard to believe that this school was only three years old. It is suggested that this promising venture might now be forced to close down, which could prove a major disaster for the architectural future of South-East Asia. In Hong Kong itself a combination of favourable conditions sometimes provides unrivalled architectural opportunity, which often is completely annulled, not so much by a lack of architects, but by a lack of suitably trained architects. One could be confident that Professor Gordon Brown's students would rise to the occasion.

D. G. DEARDEN.

Manchester.

Liverpool School

SIR,—ASTRAGAL'S comment on the five theses from the Liverpool School recently displayed at the AA does less than justice to the designers in question; it appears also to smear with a suggestion of wilful tartiness the whole climate of design at the school which produced them.

Everyone knows that a spirit of nineteenth-century liberalism still animates the school which had the good fortune to be founded by a Charles Reilly. A certain competence once proven, the enthusiast there is encouraged. Theories of social planning or of mass production are tolerated, where necessary, and so are "formalist" theories of design developed from Palladio and Corbusier. The resultant eclecticism, while no doubt disheartening to the Others, has the advantage of dispelling inhibition and allowing freedom of expression. From time to time results are achieved which are worth more than perfunctory attention.

The five schemes shown were loosely representative of a whole post-war generation of students who were fascinated by the formal aspects of Corb. planning. A manner has been defined which has stylistic affinities with the eclectic school of Luigi Moretti in Rome. In view of the current tendency to abdicate on all questions of style and cultivate the suet-pudding virtues of the flat and plain, this is no mean achievement in itself. The designs may vary in quality, they may show immaturity mingled with cleverness, they are neither ill-considered nor insincere. Finally, and here ASTRAGAL'S sources are most at fault, they are not all the work of one man.

ROBERT MAXWELL.

London.

W. R. Lethaby

SIR,—As your readers will have seen in ASTRAGAL'S column, I am studying the life of Lethaby and I should be grateful if you would allow me to enquire whether any of your readers would kindly let me know if they have letters of Lethaby's, drawings or any other material likely to help in the study of him.

London. BASIL WARD.

Professor Gordon Stephenson, above, head of the Department of Civic Design of Liverpool University, recently gave a talk to the Liverpool Architectural Society on his experiences in Perth, Western Australia. He has been asked to act as a consultant in the preparation of a plan for that city, to which he will be returning early in the New Year prior to taking up his appointment as Professor of City and Regional Planning at the Massachusetts Institute of Technology. His talk, given briefly below, is the first in a series of articles reporting the meetings of the Allied Societies.

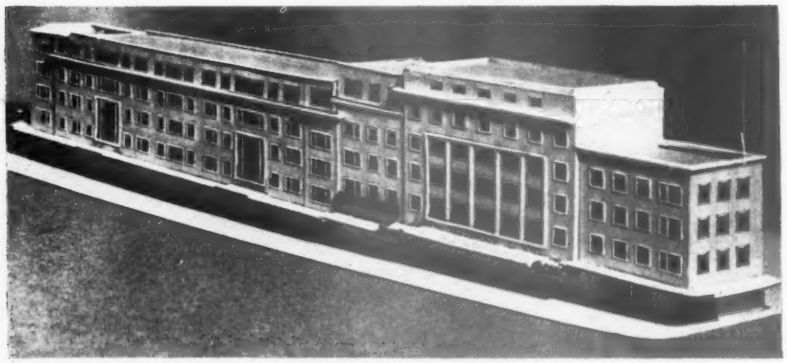
Part of Professor Stephenson's architectural audience in the Society's lecture room in Bluecoat Chambers. Front row, Miss A. D. Sloane and Mrs. and Mr. H. Bannister. Mr. Bannister is the partner of F. J. M. Ormrod, the President of the Liverpool Society. Second row, A. F. J. Pritchard, left, talking to Ross Skyner ; third row, centre, Miss Josephine Reynolds, of the staff of the Department of Civic Design, Mrs. Gordon Stephenson and Professor Gardner-Medwin, head of the Liverpool School of Architecture. Standing, left to right in the background, are : F. J. M. Ormrod, president, R. Young, Gordon Stephenson and Donald Bradshaw.

LIVERPOOL

Gordon Stephenson Talks About Perth

THE Liverpool Society, like the RIBA, conditions its members with a receptive and friendly mood for meetings by providing them with tea, sandwiches and cakes half an hour before. The society meets in a surprisingly small room, considering the size of its membership, and double doors leading into the ante-room would only allow a small increase in numbers should the lecture room overflow. However, the society scores by having the rare distinction of possessing its own rooms in Liverpool's preserved Bluecoat Chambers. The lecture room, decorated, rather disconcertingly, in cream, with green plush curtains, is lit indirectly by light reflected by the ceiling, from inverted bronze mushrooms. The effect, as always, despite tea or lecturer, is soporific. In conversation before the meeting, reference was made by several architects to the suggested design, published in a local paper, and reproduced overleaf, for the rebuilding of Lord Street in the centre of the city. Five storeys is recommended, although many property owners would apparently be content with three and, judging from the photograph, the planning authorities are paying little attention to present-day daylighting codes and floor space indices. So Liverpool prepares a course of trouble which Plymouth, ahead in its rebuilding, is now trying

Before each society meeting tea is provided for the audience who foregather in an anteroom, while next door the Society's regular Council meeting is brought to a close. Left to right : David Lingwood, Charles Rathbone, Alan Cunningham, R. K. Dewhirst, Edwin Dodgson, Gareth Roberts, Josephine Reynolds and George Hall.

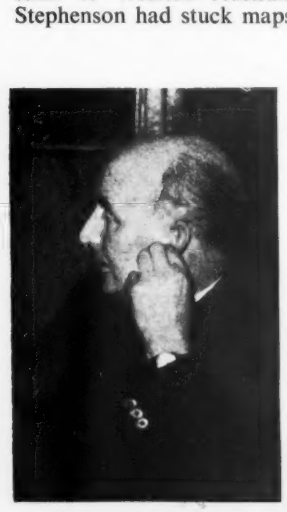


A photograph which appeared in the Liverpool Daily Post *showing a model of a five-storey development of the south side of Lord Street, in the centre of the city. It is understood that the Liverpool authorities recommend that the rebuilding of Lord Street should follow the above lines. The six-storey block on the right (furniture store by North and Partners) has already been built and designs for two other buildings in the street are being prepared in the office of architect Sir Alfred Shennan, the leader of the City Council.*

to solve : the problem of ensuring the erection of plan-conforming three, four or five-storey street frontages. However, the subject for the evening was "Impressions of Western Australia," illustrated by coloured slides (the latter projected by R. E. M. McCaughan, senior lecturer at the Department of Civic Design, with only the usual one mistake). To try and show the sixty-strong audience the scale of Western Australia, Gordon Stephenson had stuck maps on two of the walls. The State, he pointed out, is roughly twenty times as large as England and Wales. Geologically well-worn, but the bulk of it is a flatish tableland of between 1,000 and 2,000 ft. with a negligible rainfall over much of it. In the south-west a more reasonable rainfall, 40 in. a year, and a soil sufficiently fertile to support a two million population at a western standard of living, by agriculture alone. The present population is 600,000, or one half that of Merseyside. "So they have no need to think of tall flats or other ways of condensing the population." Half the population is in the metropolitan area of Perth, the area on the planning of which Professor Stephenson has been called in to advise. Recent attempts at planning have not, so far, been met with much enthusiasm. Professor Stephenson emphasised that the first task was to persuade the Government to form an organization which could function indefinitely, so that the originators of the plan could live with the plan for twenty years and adjust and change as necessary from the original concepts. The planning of Perth was partly started by Abadan; Anglo-Iranian wanted a site on the Indian Ocean and were prepared to spend £40m. on a refinery. They settled on Perth, and the city is prepared to build 1,000 houses near the site. The railway system is now in a bad way. It was planned to serve farmers in horse and wagon days and routed accordingly, but it is now much cheaper to transport everything, except wheat, by road. (Professor Stephenson then showed slides.)

In the questioning which followed Malcolm Gilling asked: "Why are architect-planners going abroad? Is the day lost over here? We recently saw an elevation in Lord Street which is the worst we've seen for years. In deserts it's relatively easy, we're being

Below, Dr. Howarth, lecturer at the School of Architecture, Manchester University, extreme right, introducing his subject: "Architectural Design Today," to his audience, the North Staffs Architectural Association, in the Building Department of the North Staffs Technical College, Stoke. The occasion was introduced by the President, D. C. Campbell, left. Dr. Howarth was primarily concerned in criticising four designs submitted by architectural assistants and students in a competition for a new ceremonial entrance and layout for St. Peter's Church, Stoke. Below left, the winner, W. N. A. Willis of Hanley, who received 20 guineas.



left with problems which haven't been tackled." Stephenson replied that there was no real difference between the two countries. People have been going abroad for a long time and should continue to do so. Liverpool should concentrate on its centre instead of overrunning good agricultural land. Planning Perth today is as if Liverpool city fathers in 1855 decided to plan for a city three or four times the size.

President Ormrod brought the meeting to a close by thanking Professor Stephenson, bidding him farewell on behalf of the society, and wishing him and his wife happiness and success in the great things they are doing.

A second society meeting which the JOURNAL *attended recently was that of the North Staffordshire Architectural Society. In the chair was the President, D. C. Campbell. The subject was a criticism by Dr. Howarth, lecturer in architecture at Manchester University, of students' designs for the layout of St. Peter's Church, Stoke.*

STOKE-ON-TRENT

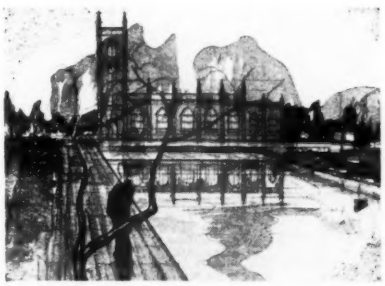
Dr. Howarth Gives a Criticism of Students

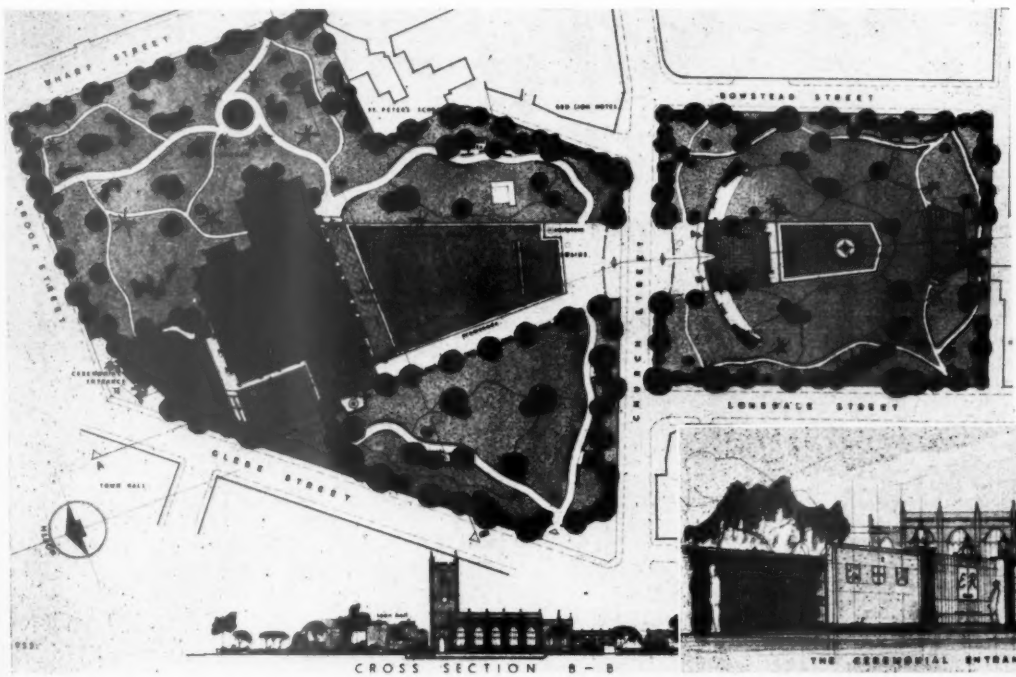
THE president, D. C. Campbell, introduced Dr. Howarth to the forty-strong audience in the Building Department of the North Staffs. Technical College. He expressed his disappointment at the small number of entries for this student competition—only four. The twenty guinea prize was given by the society. He reminded the audience of the value of frank criticism and that Dr. Howarth was the author of " a very fine book which did him great credit," on Rennie Mackintosh. Dr. Howarth went to the Glasgow School of Art.

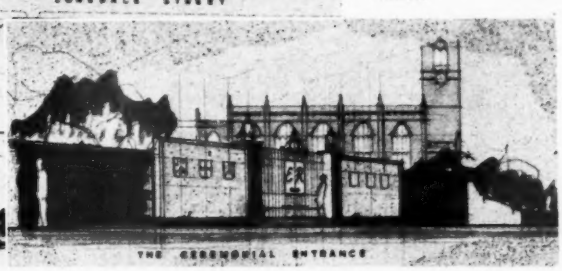
Dr. Howarth expressed surprise at the widely representative nature of the four designs submitted. The subject was the design of ceremonial entrance gates, a processional way through the churchyard, the Town Hall, and a new layout for the churchyard which should relate with another open space on the far side of a street bounding the churchyard.

Dr. Howarth advised students when first visiting a site to enquire about, look at, and sketch the objects around. He emphasised the necessity of designing the layout of trees, so that an interesting visual pattern is constantly rearranging itself as one walks through them. He was aware that students working on their own, without the benefit of architectural schools, as in this instance, had not got the stimulus which comes from a studio of thirty or forty students working on the same idea. Dr. Howarth emphasised the need for studying the character of a locality and the local materials. He regretted that today we cannot design as broadly as our forefathers, the student cannot lift himself out of a utility frame of mind, and was at a loss in designing a ceremonial entrance when ceremony itself is a little out of date. None of the designs submitted measured up to the dignity of the stone classical Town Hall.

He admired the way the winner, W. N. A. Willis, had used water as a foil to the church and, as a source of protection for the old arches of the Abbey ruins, which he placed in the water. He criticised, however, the use of brickwork in this winning design, and the poor quality of the metal design. In conclusion, he pointed out that he thought the RIBA should allow these competition designs to form part of the students' portfolios, thus encouraging more entries. A vote of thanks to Dr. Howarth then concluded the meeting.





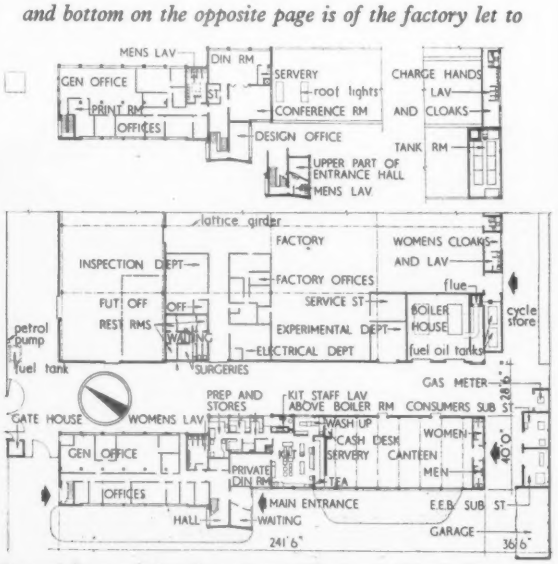


Below, left, of winning design in a student competition for a new layout for St. Peter's Church Stoke, by W. N. A. Willis, on which Dr. Howarth commented : " beautifully drawn . . . but with too much paving and paths and not enough grass . . . the terrace is too big . . . and of the ceremonial entrance (below) " rather tawdry detail . . . but the only man who really loves the church." Above, left, the winner's sketch of the pool and promenade in front of the church.

RECENT HOUSING AND FACTORIES AT HEMEL

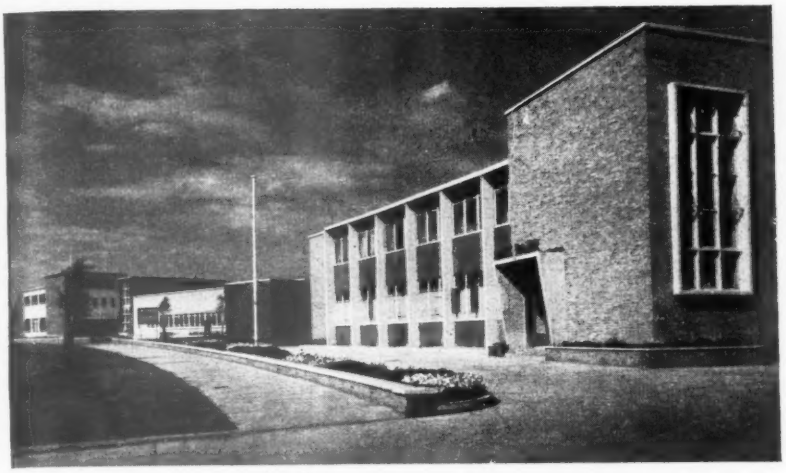
Recent housing and industrial schemes at Hemel Hempstead New Town are illustrated on this page and opposite. Part of the Bennetts End Neighbourhood, for which the planning consultants are Booth and Ledeboer, is seen in the site plan right. The terrace housing illustrated above lies to east of road 307 and is designed by G. A. Jellicoe (chief assistant, H. Tiktin). The straight roof lines of the two-storey houses is broken by the single, three-storey houses (above right) which have a quite different treatment. The two factories illustrated below and opposite are designed by W. Leslie Jones for the Hemel Hempstead Development Corporation, in collaboration with H. K. Ablett, Chief Architect to the Corporation. The photograph below and bottom on the opposite page is of the factory let to

Part plan of Bennetts End Neighbourhood

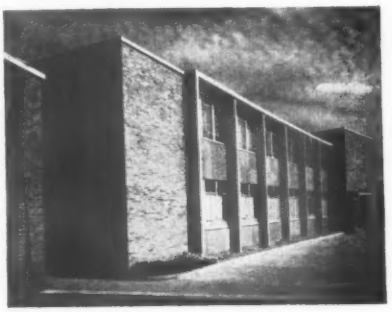


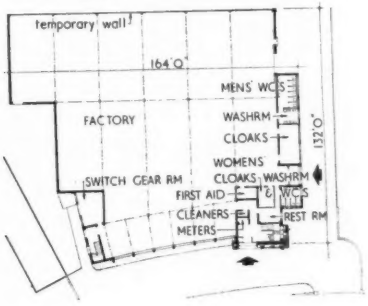
Ground floor and first floor plans (Alford and Alder Ltd.)
[Scale : $\frac{1}{16}$" = 1' 0"]

HEMPSTEAD NEW TOWN, HERTS.



Right, ground and first floor plans (Rolls Razor, Ltd.) [Scale : $\frac{1}{64}$" = 1 0"]





Alford & Alder (Engineers), Ltd. The photograph above shows the premises of Rolls Razor Ltd. and the top photograph is of both the factories, from the south. Both these factories have a two-storey office block bordering Maylands Avenue, behind which is a single-storey, north-light works area. Both factories are steel framed, have 11*-in. external cavity walls, concrete floors reinforced with mesh and finished with granolithic. The general contractors were J. Jarvis & Sons, Ltd. For sub-contractors see page* 828 *next week.*

RIBA

Architects' Conference, 1955

The council has accepted a formal invitation from the West Yorkshire Society of Architects to hold the British Architects' Conference at Harrogate in 1955.

Education Joint Committee

The chairman of the Board of Architectural Education has announced that an Interim Report of the Architectural Education Joint Committee had been considered, and he has submitted a recommendation that the principle that all candidates for the Associateship RIBA should be required to pass examinations in uniform lists of subjects be reaffirmed. The Board had considered lists of subjects put forward by the Joint Committee, he said, and has instructed them to make certain amendments and to arrange for the preparation of detailed syllabuses and prototype examination papers. The council approved the recommendation.

Scale of Charges

On the recommendation of the Practice Committee, the council has approved a comprehensive revision of the RIBA Scale of Professional Charges, to be known in future as the "Conditions of Engagement and Scale of Professional Charges," and has authorised the publication of the revised draft scale for comment by the general body of members before formal confirmation of the scale.

Literature Standardization

On the recommendation of the Science Committee, the council has agreed to draw the attention of members to the advantages of standardized sizes, shape and layout to technical trade literature, and to advise members to press manufacturers and suppliers of building materials who submitted brochures, pamphlets, etc., to adopt the recommendations made by the British Standards Institution in BS 1311 : 1946.

Appointment of Arbitrator

The council's attention has been drawn by the Practice Committee to the inconvenience caused to members appointed as arbitrators by the immediate settlement of the dispute between the parties while the preliminaries for the arbitration were in progress.

On the Committee's recommendation, it

has been agreed to make provision for the settlement of the arbitrator's initial expenses by a revision of the undertaking on the form of application for the appointment of an arbitrator, which will in future read as follows:—"I/We jointly and severally agree to provide adequate security for the due payment of any fees, costs and expenses of the Arbitrator in connection with this application and the Arbitration and to take up the Award within ten days from receipt of notice of publication."

Form of Agreement

The council has approved a recommendation of the Practice Committee that the Form of Agreement for general use between a building owner and a firm of architects should be published in two editions, one applicable to a building owner other than a statutory authority and the second applicable to a building owner who is a statutory authority.

Quicker Building

Local housing authorities in England and Wales are again urged to make full use of British Standards in a circular issued to-day by Harold Macmillan, the Minister of Housing and Local Government. "Their advantages are now well established—they make for quicker and cheaper manufacture, facilitate construction on the site, and assure economy in maintenance costs."

To ensure that housing authorities are kept up to date, the British Standards Institution is sending them a list showing current standards most likely to be applicable to local authority housing schemes. The list will be re-issued with amendments at intervals of six to nine months. It includes such things as materials for walls, ceiling finishes, roofs, floors, windows, doors, kitchen and bathroom fittings, stoves, boilers, paints and wallpapers.

AA

Evening Classes: No more Vacancies Yet

The AA has had about fifty inquiries about their new evening course in design. Only forty students can be accommodated during the first term and the AA is unable to accept further applications for the Easter term until after January 1. A further announcement will be made in March.

The following AA members have offered to act as honorary tutors or lecturers:—Sir Hugh Casson, Peter Shepheard, B. Westwood, D. Clarke Hall, N. Conder, J. Brandon Jones, H. Cadbury Brown, R. F. Jordan, F. Atkinson, Graeme Shankland.

DIARY

Different Kinds of Nursery Schools. Exhibition at 1, Park Crescent, W.1. (Sponsor: The Nursery School Association of Great Britain and Northern Ireland.) Weekdays, 10.30 a.m. to 4.30 p.m.

DECEMBER 28—JANUARY 16

Honour Your Forbears. John Betjeman at the RIBA, 66, Portland Place, W.1, 6 p.m. Also Announcement of Award of Prizes and Studentships.

JANUARY 5

University of Sheffield Architectural Competition. Premiated designs. At RIBA, 66, Portland Place, W.1. Weekdays, 10 a.m.—7 p.m.; Saturday, 10 a.m.—5 p.m.

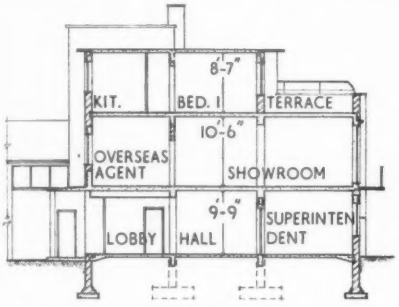
JANUARY 8—20

EXPORT OFFICES AND SHOWROOMS

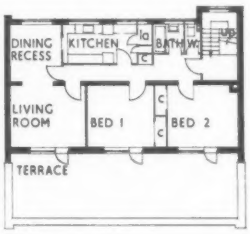
These premises for the Star Brush Co., Ltd., in Holloway, accommodate export offices, showrooms, warehouse and flat. They were designed by Hughes and Bicknell. The clients, who make fibre brushes, mats, etc., wished to centralise their export activities in one building, which has been erected at the main entrance to their factory. A general enquiry office is also incorporated in the new building, and the top floor is occupied by a flat for the works manager. The photographs on this page, show, top, the roof terrace

IN EDEN GROVE, HOLLOWAY, LONDON, N.7

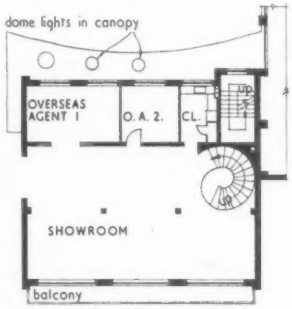
outside the manager's flat, centre, the main circular staircase at first floor level, bottom, the view across Eden Grove from the south. On this page, top, right, the covered way on the north side of the office block, centre, the ground floor hall looking towards the main staircase, and bottom, doors leading from the entrance hall to the general office. The clients required that the warehouse should be easily accessible from the factory yard, that the first floor showroom should be well lit and face south or east, and that there should be accommodation for serving refreshments to visitors. The offices have external brick load-bearing walls and hollow-tile floors and roof. The circular stair has precast terrazzo cantilevered treads and a wall lining of fluted terrazzo. The general contractors were H. Fairweather & Co., Ltd. Sub-contractors, page 828 next week.



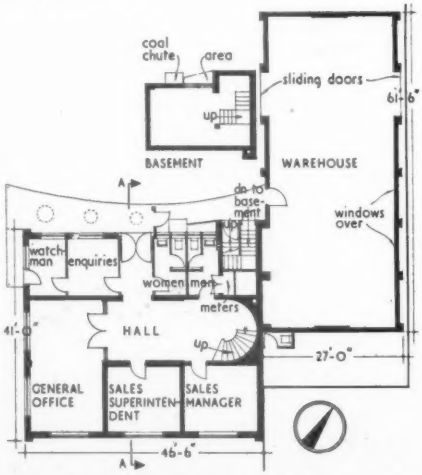
Section A-A [Scale : $\frac{1}{4}$" = 1' 0"]



Second floor plan



First floor plan



Ground floor plan [Scale : $\frac{1}{16}$" = 1' 0"]

OFFICES and LABORATORIES

at FERNHURST, near HASLEMERE, SURREY

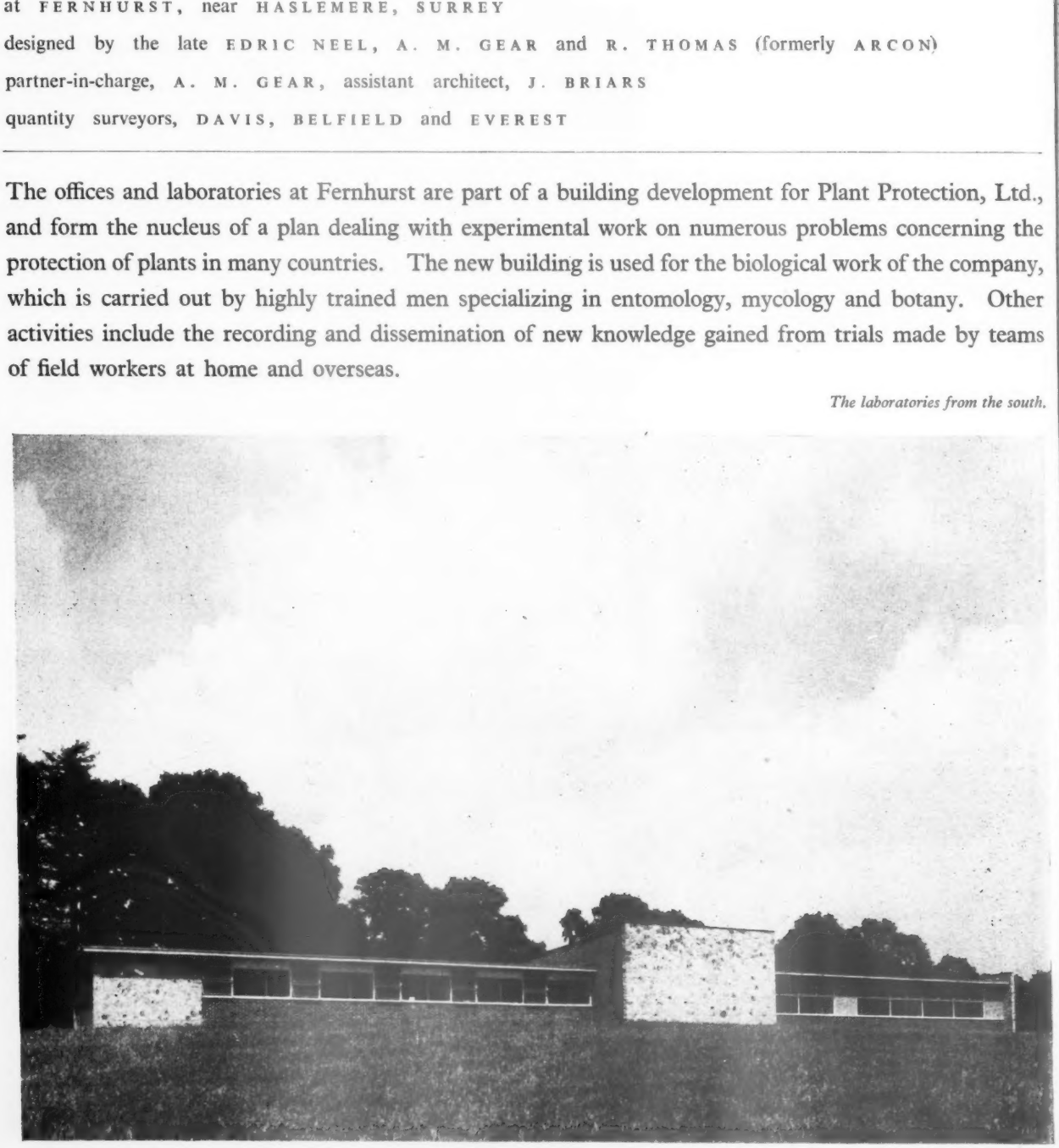
designed by the late EDRIC NEEL, A. M. GEAR and R. THOMAS (formerly ARCON)

partner-in-charge, A. M. GEAR, assistant architect, J. BRIARS

quantity surveyors, DAVIS, BELFIELD and EVEREST

The offices and laboratories at Fernhurst are part of a building development for Plant Protection, Ltd., and form the nucleus of a plan dealing with experimental work on numerous problems concerning the protection of plants in many countries. The new building is used for the biological work of the company, which is carried out by highly trained men specializing in entomology, mycology and botany. Other activities include the recording and dissemination of new knowledge gained from trials made by teams of field workers at home and overseas.

The laboratories from the south.



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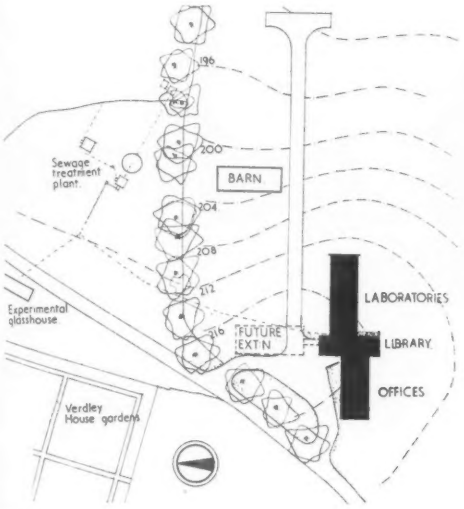
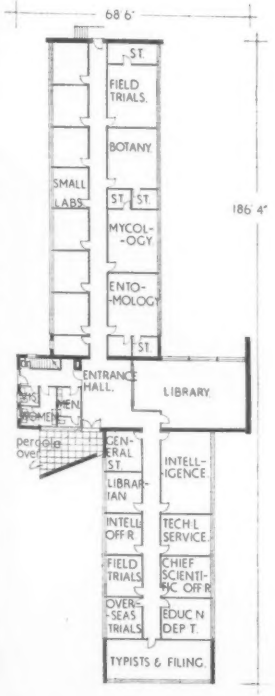
SITE.—The site is backed by a ring of trees on the north and west and slopes away gently to the south with a good view.

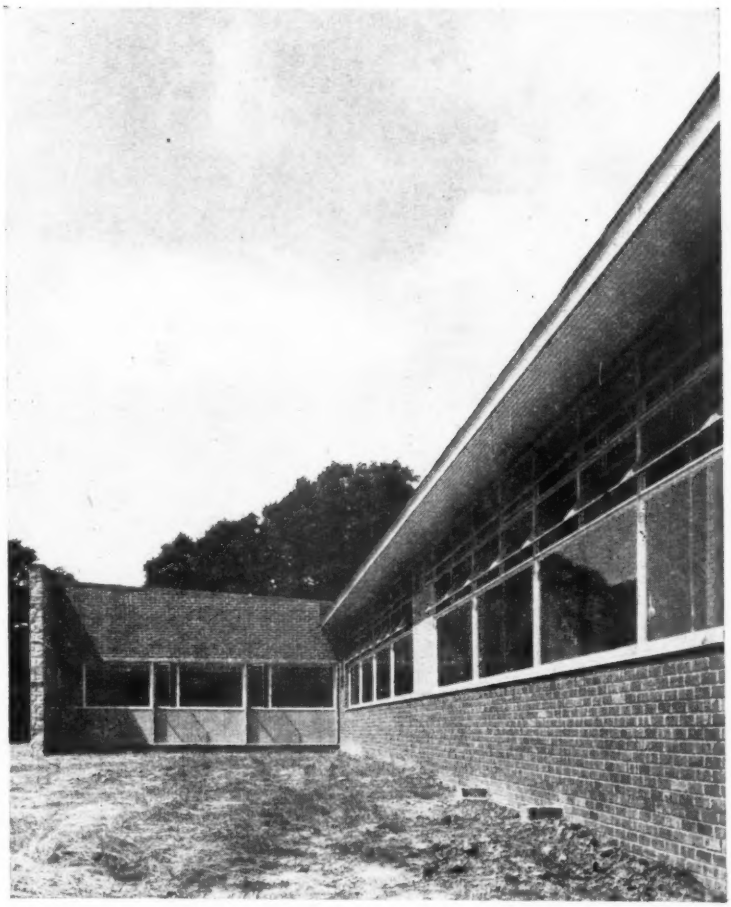
PLAN.—A library unit has been used as a central link between the laboratories on the east side and the offices on the west. There are also intelligence and record rooms. As the ultimate development and use of the building is unknown the architects aimed at maximum flexibility in the planning. To achieve this, internal partitions are completely separated from the main truss line; the finished floor surface was applied throughout before the erection of partitioning; all services are run around the periphery of the east and west wings and under-floor heating is used throughout.

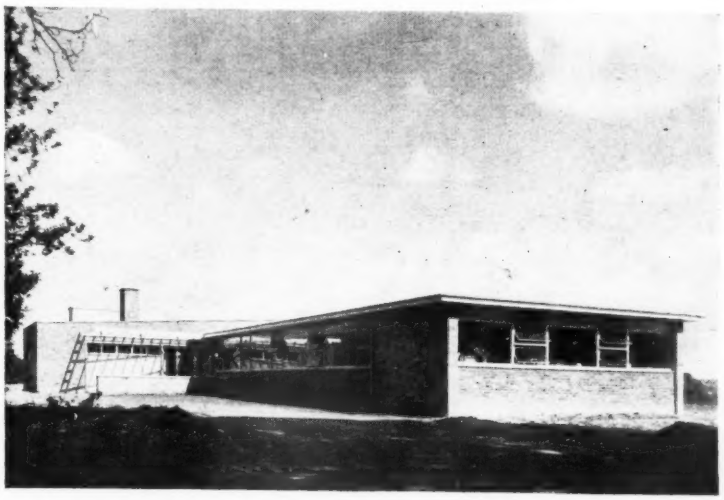


Site plan



Plan [Scale: 1/16" = 1' 0"]



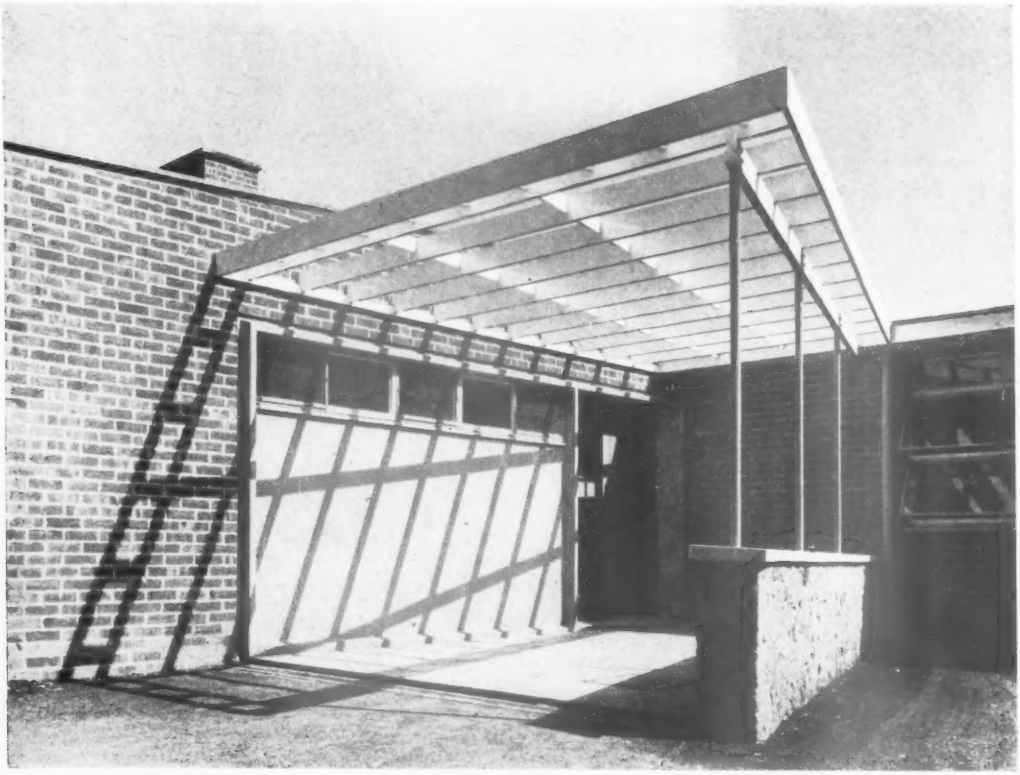


Top, from the east, looking along the laboratory block towards the library. Above, the main entrance on the left and the office block seen from the north-west.

OFFICES AND LABORATORIES

at FERNHURST, near HASLEMERE, SURREY

designed by the late EDRIC NEEL, A. M. GEAR and R. THOMAS (formerly ARCON)



Left, the main entrance from the north-west. Bottom, a corner of the library showing exposed lattice beams, as detailed in the drawings below.

OFFICES AND LABORATORIES

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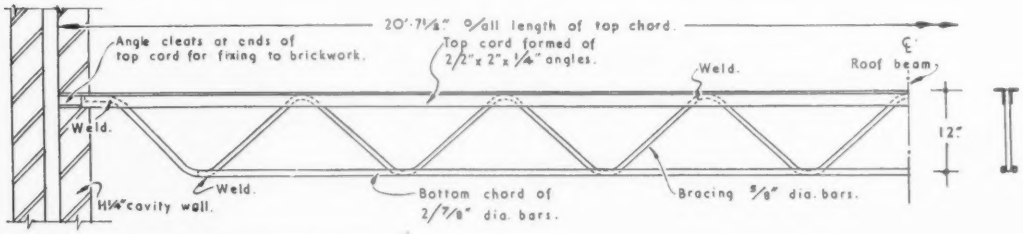
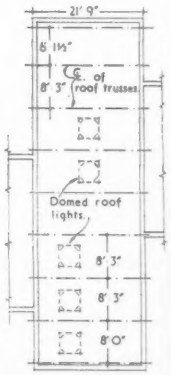

20'-7¼" O/all length of top chord.
Angle cleats at ends of top card for fixing to brickwork.
Top card formed of 2½" x 2" x ¼" angles.
Weld.
℄ Roof beam
Weld.
12"
Weld.
11¼" cavity wall.
Bottom chord of 2/7/8" dia. bars.
Bracing ⅝" dia. bars.

Elevation and section of typical lattice beam
[Scale : ½" = 1' 0"]

Key plan of library block
[Scale : 1/32" = 1' 0"]

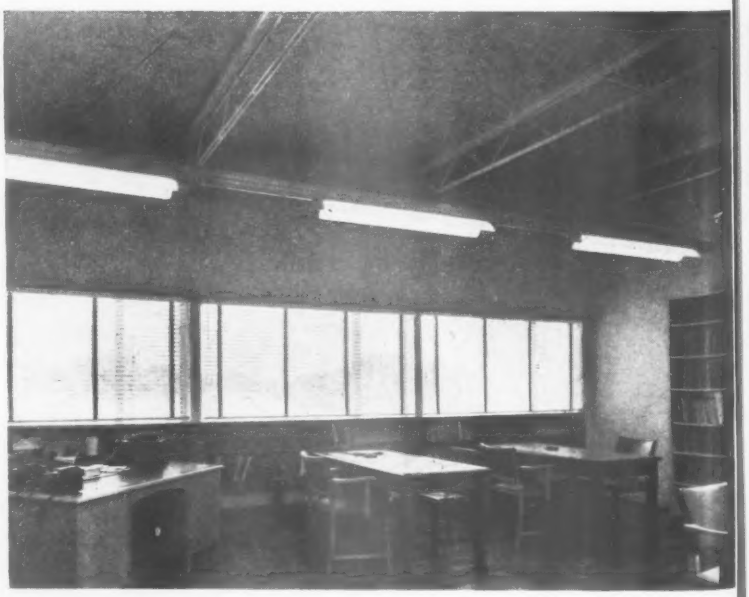


CONSTRUCTION.—The building has a steel frame supporting roofs of asbestos cavity decking. External walls are of local hand-made facing bricks with raked joints or local stone.

FINISHES.—Roofs are finished with green mineral finish and ceilings are covered with asbestos spray. Walls are plastered and distempered. Floors are covered with thermoplastic tiles, wood blocks and quarry tiles in lavatories. Steel windows and sills are used throughout. All linings, frames and doors in the entrance hall and library area are of opepe hardwood.

The contract price was £20,388. The price per ft. cube was 4s. 3d. and per ft. square £3.

The general contractors were F. Milton & Sons, Ltd. For sub-contractors, see page 798.



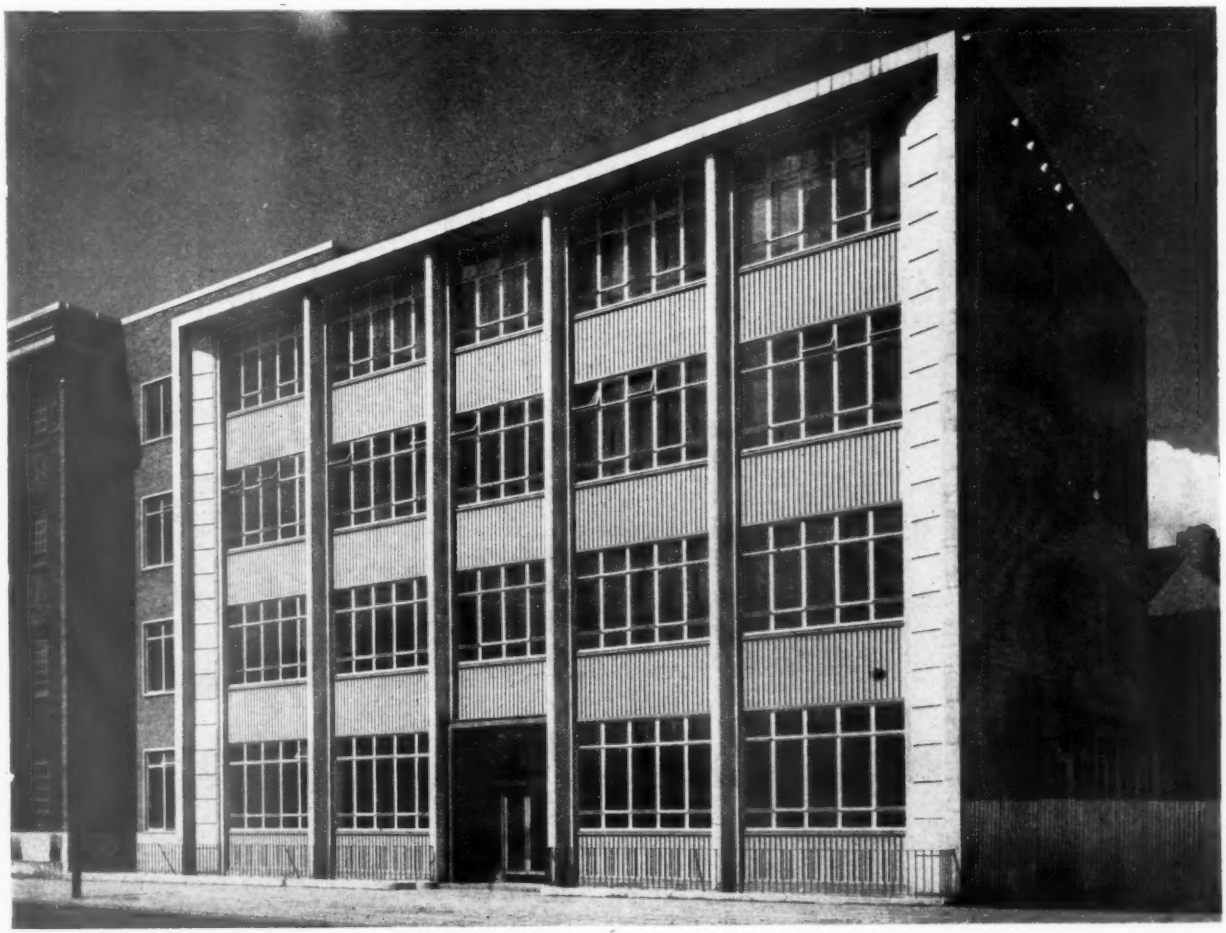
COLLEGE EXTENSION

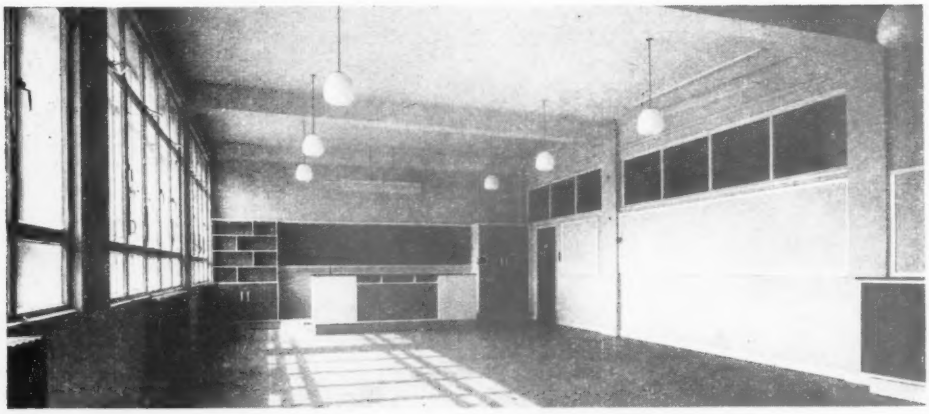
in TITHEBARN STREET, LIVERPOOL

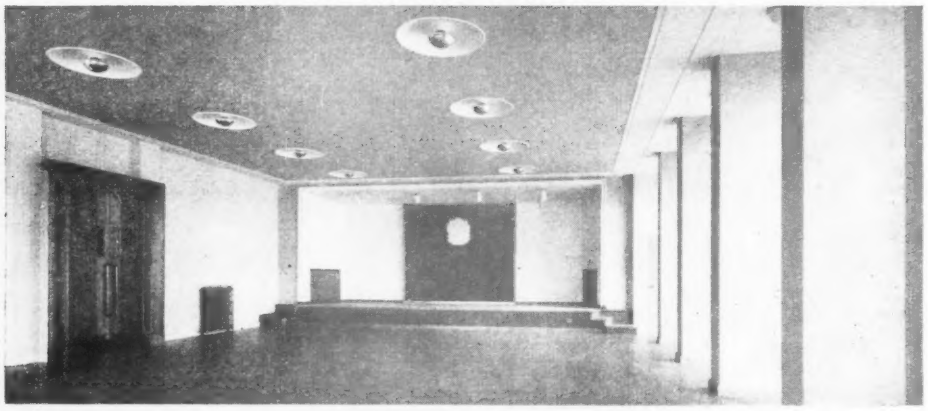
designed by RONALD BRADBURY, city architect; JOHN PATTERSON, deputy city architect; S. E. MAHON, principal architect; A. T. ASHWORTH, first assistant architect; J. J. MOORE and N. T. EVANS, assistant architects; H. HILL, structural engineer

The original College of Commerce, which was erected about 20 years ago, is on the corner of Tithebarn Street and Smithfield Street and the new extension, illustrated here, is the first instalment of a large scheme which will later occupy the Tithebarn Street-Vauxhall Road corner site. The extension will alleviate the shortage of teaching accommodation brought about by the considerable increase in the number of day and evening pupils. There is provision for approximately 300 new pupils.

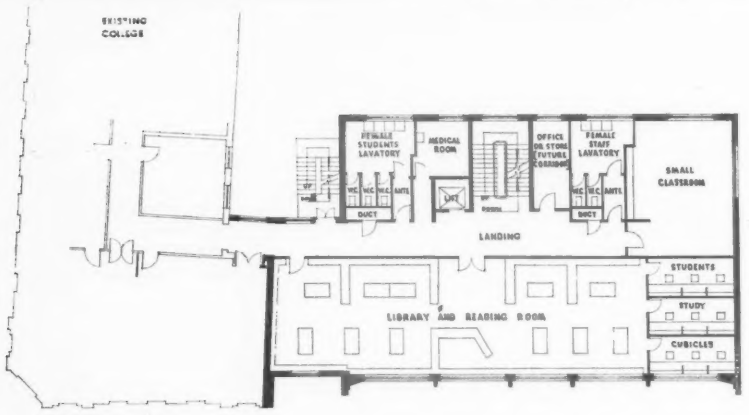
The south facade. The vertical fins are of cast stone and panels between windows are of fluted cast iron.



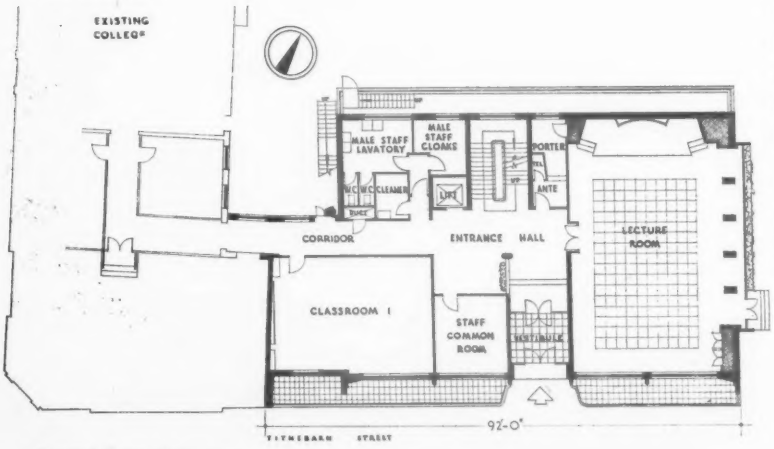




Above, left, the geography classroom which has walls painted French beige, and woodwork painted ivory, grey and venetian red. Left, the ground floor lecture hall. Walls are grey and primrose, the ceiling is arctic blue and the woodwork is meranti and walnut. Above, part of the entrance hall, showing, on the left, the porter's room.



Third floor plan



Ground floor plan [Scale : $\frac{1}{16}$" = 1'0"]

GENERAL.—The site was formerly occupied by buildings which had been demolished by enemy action and the land was compulsorily purchased. The extension comprises lecture room, four general classrooms, special classrooms for book-keeping, accountancy and geography (these are situated on the first and second floors, plans of which are not shown), staff and students' common rooms, library, study cubicles, cloakroom and lavatories. Corridors on all floors give access to the original college building.

The contract price for the construction work was £58,490 and £6,612 for structural steelwork.

The General Contractors were Wm. Hall & Son Ltd.

For Sub-contractors see page 798.

COLLEGE EXTENSION

in TITHEBARN STREET, LIVERPOOL

designed by RONALD BRADBURY, city architect

Below, the main entrance doors are in oak, bleached and wax polished. The floor is covered with rubber tiles. Bottom, the third-floor library and reading room. Book shelves and tables are in idigbo; walls are grey, ceiling is ivory and floor covering is rubber. The building is steel-framed with hollow-tiled floor, roof and partitions.

The periodical display rack seen on the right of this photograph was specially designed and made in idigbo and perforated hardboards with an ivory stove-enamelled tubular frame.

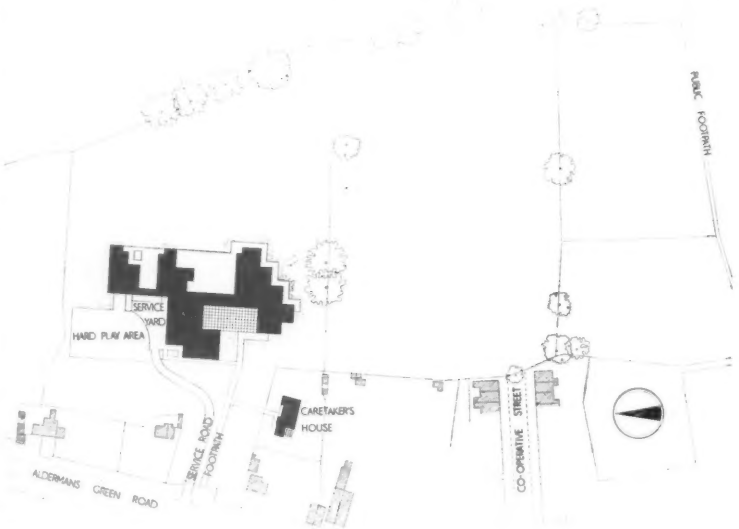
PRIMARY SCHOOL

at ALDERMAN'S GREEN, COVENTRY, WARWICKSHIRE
designed by A. M. GEAR, the late EDRIC NEEL and RODNEY THOMAS (formerly ARCON); partner-in-charge, A. M. GEAR; assistant architect, J. T. BRIARS; heating and electrical consultants, BRANDT and O'DELL; quantity surveyors, DAVIS, BELFIELD and EVEREST

The primary school at Alderman's Green is the first section of a two-form entry school, which, when the scheme is completed, will accommodate 600 juniors and infants and will also include a nursery school. The clients, the Coventry Education Authority, required that the construction of the school should be as much as possible in non-traditional form as the lack of craftsmen locally, particularly bricklayers, causes great delays in the erection of traditional buildings.

Terrace leading to the main entrance from the north-west.

From the south-east.

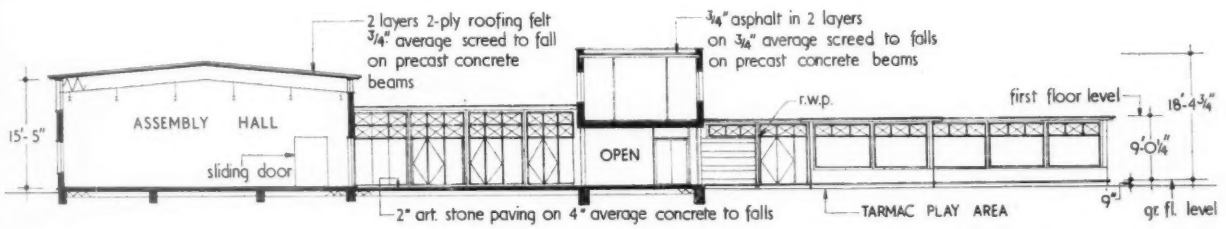


Site plan

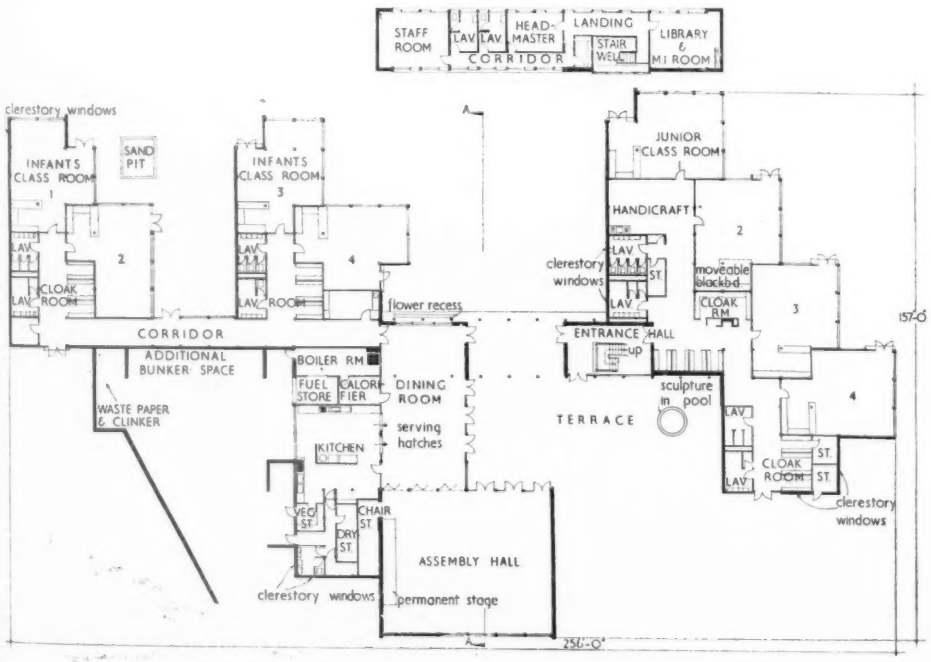
SITE.—There is a pleasant view to the west overlooking the Wyken Pool and this, together with the wish to get a southern aspect to all classroom areas, influenced the layout of teaching space.

PLAN.—Classrooms for juniors and infants are planned in separate groups, linked by a two-storey wing containing the entrance hall on the ground floor and staff and M.I. rooms on the upper floor.

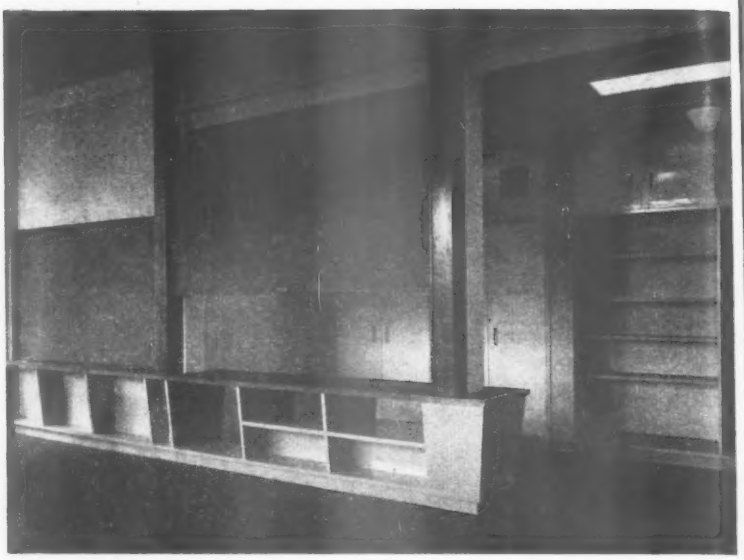
CONSTRUCTION.—Although the school is built over a disused mine, it was decided that to design foundations for any possible subsidence would be to incur unnecessary expenditure, but owing to the extremely shrinkable clay soil, the foundations are



Section A-A [Scale : 1/24" = 1' 0"]



Ground and first floor plans. (First floor rooms are over the entrance hall and part of the dining room) [Scale : 1/24" = 1' 0"]



PRIMARY SCHOOL

at ALDERMAN'S GREEN, COVENTRY
designed by A. M. GEAR, EDRIC NEEL and RODNEY THOMAS (formerly ARCON)

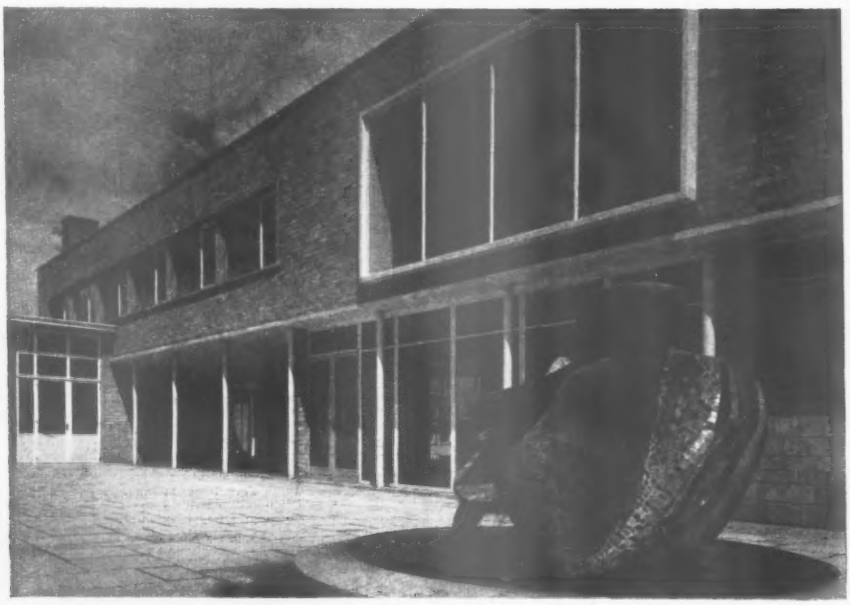
suitably reinforced. All the single-storey areas are steel framed on an 8-ft. 3-in. grid and there are standard precast concrete roofing units. External walls are double-skinned and faced either with alternate 8-in. and 1-ft. 4-in. wide precast spar finished concrete units or mixed golden-brown rustic facings. The two-storey block is also steel framed, with tubular stanchions and r.c. floor and roof.

FINISHES.—To provide contrast to the precision of the concrete external wall treatment, some Hornton stone is used for wall facing and linings to first-floor windows. Internally, all walls are painted and ceilings are of painted fibreboard. Floors are covered with linoleum in classrooms and staff rooms, missanda wood blocks in dining and assembly halls, quarry tiles in cloakrooms and kitchen, Hornton stone slabs in entrance hall and covered way. Roofs are finished with roofing felt, three layers of grit and ½-in. insulation board.

SERVICES.—A ½-in. layer of cork covers the structural slab; "underfloor" heating panels on it are covered with expanded metal lathing. This enables the pipes to be laid closer to the surface as the lathing distributes the direct heat from the pipes over a greater surface area. This school forms part of the 1950 MOE programme, when the net cost per place limit was £170 per place. Total cost on tender (February, 1951) is £57,500, including caretaker's cottage and site works. The net cost per place is £162 5s. and there are 54·2 sq. ft. per place.

The general contractors were Higgs & Hill, Ltd. For sub-contractors, see page 798.

Top, staircase to first floor staff rooms, constructed of steel tubes and rods and 1½-in. teak treads. This staircase was illustrated as a Working Detail in the JOURNAL *for September 24, 1953. Top, right, storage space and blackboards in typical junior classroom. Right, the west facade of the two-storey wing which links the junior and infants' departments. The sculpture in the pool was designed by W. L. Freeth.*



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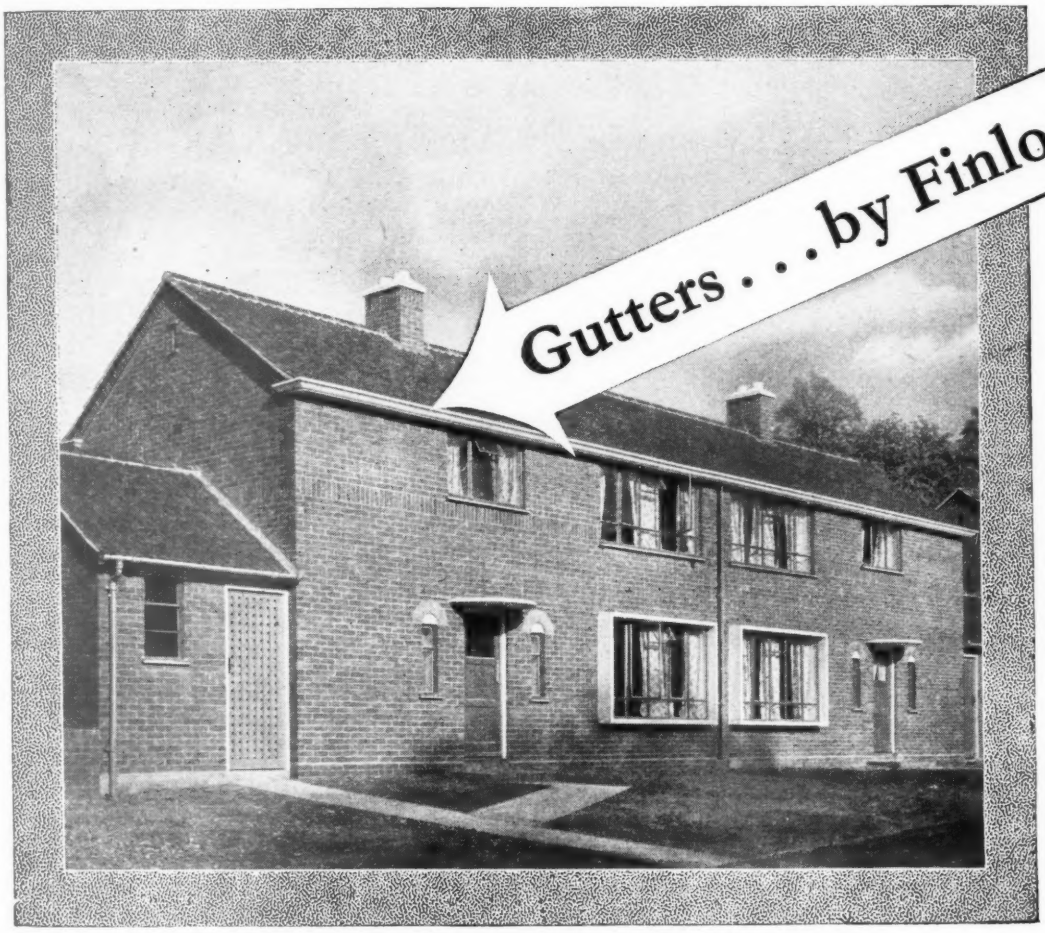

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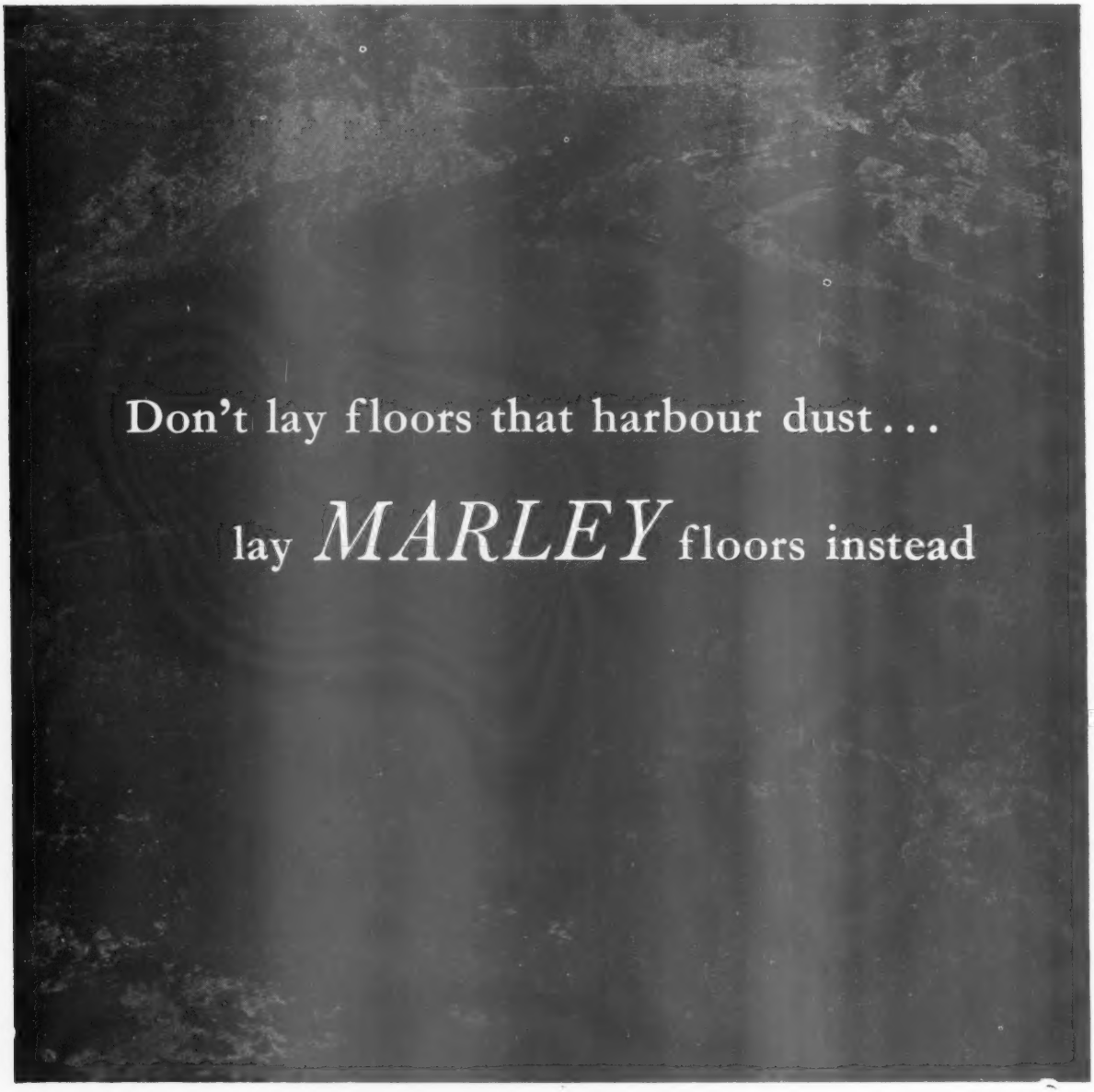

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TECHNICAL SECTION

All architects must surely welcome the recent repeal of restrictions on the use of certain materials, but there seems to be a danger that with a return to freedom of choice there may be a return to pre-shortage ideas without sufficient thought being given to some of the lessons which we have been forced to learn while the restrictions have been in force. For example, some people have already been heard rejoicing at the revived opportunity to use hollow, floor joist construction for the ground floors of houses, although it is doubtful whether this traditional form of construction is as economical as a solid floor (except on sloping sites), and some of the larger firms of speculative builders had already changed over to solid floor construction before the war. It is certain that heat losses are less, and thermal comfort greater, with solid floors than with open joist construction, unless special care is taken to avoid draughts and to add under-floor thermal insulation, and, although many people prefer a wood floor finish to most of the finishes which are laid on solid floors, for houses outside the lowest price range it may now be possible to combine a wood block or strip finish with solid floor construction. (Those who have used this combination will be aware of the need for care in providing a proper damp-proof membrane and for ensuring that the top screed, if a " sandwich floor " is used, has thoroughly dried out before the floor finish is laid.)

Both solid and open-joist floors can be satisfactory, if appropriately designed, but it would be most unfortunate if the advantages of solid floors were forgotten in any excess of enthusiasm to return to the " good old days."

This week's special article

22 SOUND INSULATION & ACOUSTICS
musical tone and acoustical design : part 2

The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant Information Centre items. Further and earlier information can be found by referring to the index published free each year.

H. Creighton continues this week his article on musical tone and acoustical design. He describes the various scientific attributes of musical notes and their relationship with structure and the size of the audience. In a further article, Mr. Creighton will show how the design of the concert platform can influence the acoustics of the auditorium.

The field of sound surrounding a listener to music consists at any moment of an infinite number of sound waves, of differing pitch and intensity, travelling in every possible direction. The pitch of a sound is determined by the frequency of vibration of the waves which produce it, but a musical note is composed not only of waves of a single frequency (called the " fundamental "), which gives the pitch as recognized by the ear, but also of many other frequencies as well (called " partials " or " harmonics ") which, being integral multiples of the fundamental frequency, are higher in pitch. The relative strength of the fundamental and of the various harmonics varies from instrument to instrument and over the different registers of the same instru-

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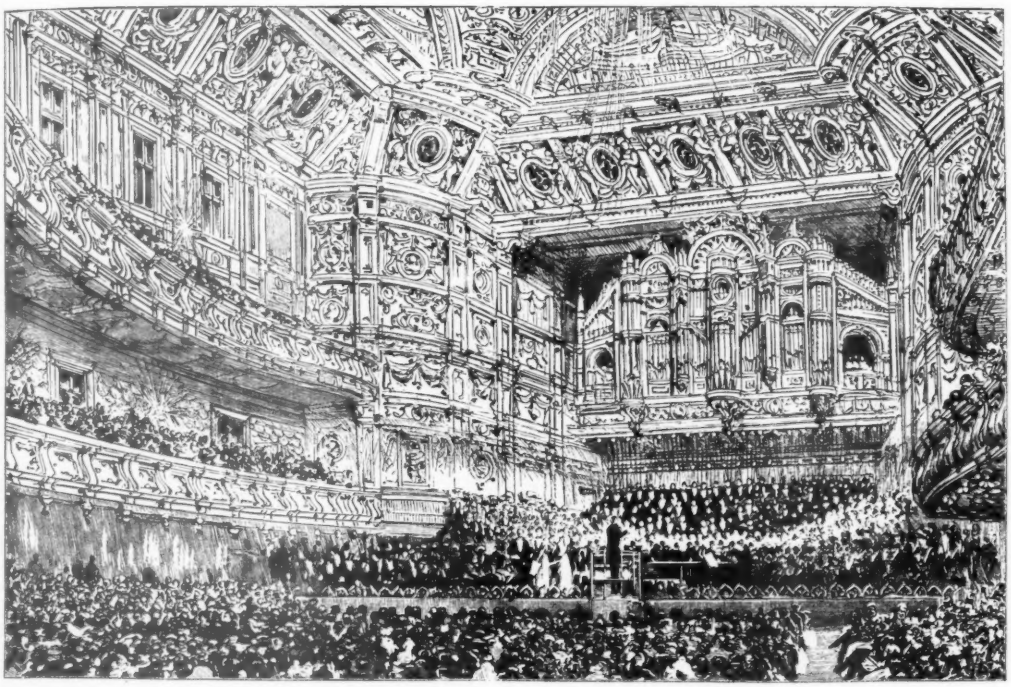

The Queen's Hall, now destroyed, which, with an audience capacity of 2,400, served to set our present standard of tone.

ment. It is called the "harmonic structure" of a note and is chiefly responsible for its quality or tone colour.

Quality owes much, in addition, to certain non-musical noises or "transients" which initiate the sound. Vocal consonants are the most important but there are also the scratches, puffs, and buzzes produced by various instruments. Transients are responsible for the sharpness of "attack" of a sound. It is easy to demonstrate the influence on tone quality of these and other factors by recording a note played on, say, a piano and then playing the recording backwards, so that it swells from soft to loud and ends, instead of beginning, with an impact. Played this way, the sound has none of the qualities of a piano note.

The response of a room to sound produced within it is very similar to harmonic structure and it is, perhaps, not too fanciful to compare the initial transients in sound which travels directly from an instrument to a listener with the reverberation to the sustained tone which follows the transient. Reverberation is the more-or-less random inter-reflection of sound between the surfaces of the room and is audible after the source of sound has been cut off, until all the energy is absorbed. Direct sound comprises those waves which travel straight from the source to the audience, *i.e.*, the music as it is played—the transcription into sound of the notes of the score, and conveys the sense of the music. It is under the immediate control of the performer. Reverberation the performer cannot control; it is the contribution of the room, modifying the tone of all sounds produced within it.

DIRECT SOUND AND REVERBERATION

The tonal qualities of music can be analysed with a fair degree of accuracy in terms of these two concepts (direct sound and reverberation). Definition, for example, is simply the clarity of the direct sound; it can never, strictly speaking, be better than in the open air, where there is no reverberation. But, for practical purposes, clarity depends partly on loudness, because, both in the open air and in a room of any size, direct sound may need reinforcement if it is to carry far enough and if it is to compete effectively with extraneous noise. First reflections from surfaces close to the performers can give this reinforcement, and so contribute to definition, but they must follow very closely on the original sound because anything in the nature of an echo or "grunt" must be avoided. Reverberation, in this context, cannot be classed simply as noise, because the ear is able, to a certain extent, to integrate reverberant with direct sound, so that reverberation can increase loudness, although it is always detrimental to definition.

For fullness of tone, long reverberation is of prime importance. This can be demonstrated by comparing tone in a cathedral with tone in a theatre. But duration is not the only criterion applicable to reverberation; "smoothness"—whether the sound decays at a constant rate, or in a series of jumps and fluctuations—is also important. The former condition is probably the more desirable for fullness (though not necessarily from other points of view) and requires effective diffusion, or scattering, of the sound waves throughout the room. Similarly, with regard to frequency, reverberation time should show a smooth variation, not pronounced differences, over the whole frequency range. Fullness of tone means the enhancement, without distortion, of the sound of an instrument; this is not obtained if some regions of pitch are emphasized at the expense of others.

The reverberation of a room can alter the balance between fundamentals and harmonics; it can also affect the relative strength of bass and treble instruments. Direct sound also influences orchestral balance, because its high frequency components are more readily attenuated during their passage through the air and more easily absorbed and screened from the audience by obstructions—that is, they are more "directional"—than low frequency components. If high frequencies are present in the *direct* sound and are heard, even only instantaneously, they can, like transients, convey an initial impression of quality which will colour subsequent reverberation. On the other hand, pronounced high frequency components in the reverberant sound make the tone strident or harsh.

Not only high frequencies but also the total output of some instruments is directional—that is, emitted in a narrow beam, instead of equally in all directions. The voice is highly directional,

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3. Delivery up to the Plaintiffs of all copies of the Defendants' pamphlet "Radiant Heating Panels" and all other material infringing the Plaintiffs' said copyright or embodying figures taken from the Plaintiffs' said pamphlet.

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so are trumpets and violins. Most other wind instruments are directional only to a limited extent and drums not at all. This aspect of tone production is important for orchestral balance, and its effect on platform layout, together with its effects on ensemble and blend, will be dealt with in a future article.

With regard to blend, I have used the word " remoteness " (last week), but it is not so much the *distance* from the performers that matters, but the number of different directions from which sound appears to come—the further away a person is from a widely scattered orchestra, the more nearly the sound from each member of it seems to come from the same direction. Blend can also be destroyed by strong individual reflections from the ceiling or the back wall, even if they do not last long enough to be detected as such.

ACOUSTICAL DESIGN

It is not possible to describe here all the deductions which can be drawn from the above analysis, but it should be clear that there is no single, absolute standard of " good acoustics." Musically, there is broad agreement that certain tonal qualities are more important for certain types of music than others, though here some questionable assumptions are commonly made, for instance that church conditions are always suitable for organ solo work. In any case, there is opportunity for wide divergences of personal taste, which cannot be argued, but only accepted. Moreover, improvement in one direction often means a sacrifice in another, so that a definite musical choice has to be made from the outset, which will depend either on the personal taste of the designer or on the supposed preferences of the musical public as a whole; it need hardly be pointed out that the latter is an exceedingly elusive quantity. Even when this choice has been made, the scientific ground is by no means firm under one's feet. It is quite impossible to say, for instance, that a certain reverberation time will result in " full " tone in a room of a certain size, because what matters is not the actual, measured or calculated, reverberation time but the listener's subjective impression of reverberation, and this is modified by other factors, in particular the strength of direct sound, which in its turn will affect such other qualities as definition, loudness and balance.

Reverberation time, which is still the only quantity which is precisely calculable in advance, has until recently been the one fixed point in design; it now appears, however, that good results can be obtained within a much wider range of reverberation times than had previously been supposed, if those features of the design which bear on direct sound are suitably adjusted. This makes for greater freedom in design, but it also imposes a limitation: One of the principal problems in acoustical design has always been the attempt to get " perfect " definition combined with " perfect " fullness of tone, which is taken to mean, as is roughly true, the longest possible reverberation together with the strongest possible direct sound. The difficulty is that the requirements for these two conditions are mutually exclusive, in so far as that proportion of the total output of sound which has been absorbed by the audience cannot thereafter help to build up reverberation. Moreover, impressions of fullness or definition depend on the relative, not the absolute, values of the two components, so that, subjectively, an improvement in the one implies a diminution of the other.

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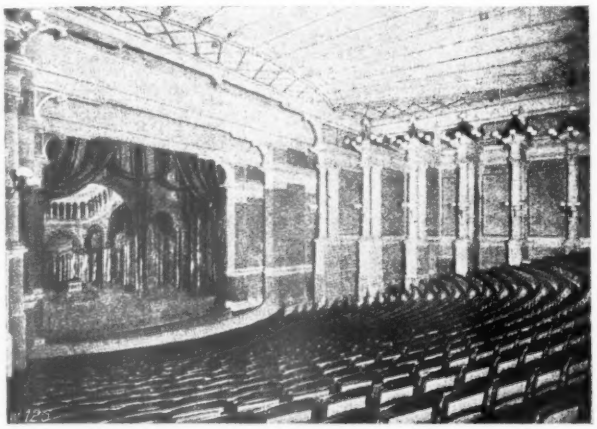

Music is no longer conceived in terms of the acoustical environment of any particular building—church, theatre or salon. It now claims dominance in the partnership and demands that buildings be created to suit its own requirements, a step first taken in practice in 1876 by Wagner in the design of the Bayreuth Festival Theatre, left.

Accurate studies of the decay of sound suggest that this problem may not be insoluble, but it cannot be solved by means of the approximations used in design.

SIZE OF AUDIENCE

This particular aspect of the problem of acoustical design has been stressed because it affects the fundamental question of the optimum size of rooms for music. It is comparatively easy to provide good conditions for small audiences—say 500-800—but the majority of buildings in which music is performed are very much larger than this. The chief difficulty which is encountered in large halls is to get a reverberation time long enough for full tone; several recent halls, designed to give a reverberation time of about 2 seconds, have, in fact, achieved only 1·5-1·6 seconds. The reverberation time could have been increased only by increasing the volume (and, therefore, the cost). But an increase in volume is not the whole solution to the problem, for dimensions cannot safely be increased past a certain point without risking echoes and other troubles. Moreover, the farthest seats from the platform in a hall holding 3,000 people are usually distant enough to require powerful reflection of direct sound if definition is not to be lost, and reflections from a large area such as a concert platform cannot be directed exclusively to the back of the hall. Hence, if the hall is very large, there will be an excessively strong direct component, and consequent lack of fullness, nearer the front. If tone is to be full (and this is in any case difficult to achieve) definition at the rear of the hall will suffer; if definition at the rear is adequate, fullness is lost at the front.

This argument suggests very strongly that there is a limit to the size of audience for which good musical tone can be provided; this limit has been put at about 2,000, and it is noteworthy that none of the older concert halls which set our present standards of tone much exceeded this figure. The old Queen's Hall held 2,400 and the Gewandhaus at Leipzig only 1,500. Both of these have been destroyed, and nowadays audiences of 3,000-4,000 are needed if concert promotion is to pay its way. The buildings which accommodate future musical performances will alter our musical standards, so that in a typically modern fashion—economically—architecture will again dictate to music.

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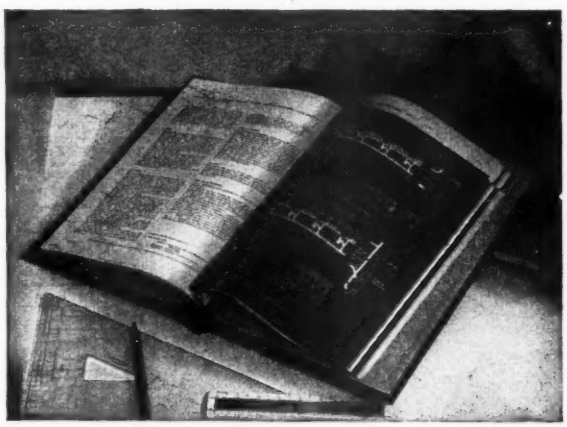

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Buildings Illustrated

Offices and Laboratories at Fernhurst, near Haslemere, Surrey, for Plant Protection, Ltd.. (Pages 784-786.) Architects: the late Edric Neel, A. M. Gear, R. Thomas (formerly Arcon): Partner-in-Charge, A. M. Gear, A.R.I.B.A., Assistant, J. Briars, A.R.I.B.A. Quantity Surveyors, Davis, Belfield & Everest. General Contractor: F. Milton & Sons, Ltd. General Foreman: W. Harriss. Subcontractors: bricks, Nutbourne Facing Brick Co.; walling stone, Local Stone Co., Ltd.; structural steel, Light Steelwork (1952), Ltd.; tiles, Marley Tile Co., Ltd.; roofing and cavity decking, Higginson & Wright; asbestos spray, Turners Asbestos Cement Co., Ltd.; dome lights, Pilkington Bros., Ltd.; woodblock flooring, Hollis Bros., Ltd.; central heating, G. N. Haden & Sons, Ltd.; electric wiring, electric light fixtures, B. & S. Electrical Contractors, Ltd.; sanitary fittings, B. Finch & Co., Ltd.; door furniture, A. J. Binns; window furniture, Williams & Williams, Ltd.; iron staircases, Smith & Jewell, Ltd.; sunblinds, J. Avery & Co.; coping stone, The London & Sussex Merchants, Ltd.; laboratory benching, A. Gallenkamp & Co., Ltd.; library fittings, Luxfer, Ltd.

City College of Commerce Extension, Tithebarn Street, Liverpool. (Pages 787-789.) Architect: Dr. Ronald Bradbury, PH.D., F.R.I.B.A., A.M.T.P.I., City Architect & Director of Housing, assisted by John Patterson, A.R.I.B.A., A.M.T.P.I., Deputy City Architect, S. E. Mahon, B.ARCH., A.R.I.B.A., Principal Architect, A. T. Ashworth, DIP.ARCH., A.R.I.B.A., First Assistant Architect and J. J. Moore, B.ARCH., A.R.I.B.A., and N. T. Evans, B.ARCH., A.R.I.B.A., Assistant Architects and H. Hill, A.M.I.C.E., A. M. I. Smith, M.A., F.R.P.S., STRUCT.E., Structural Engineer of the Department. City Coat of Arms: H. Tyson. General contractors: Wm. Hall & Son Ltd. Sub-contractors: structural steelwork, McIntyre & Sons Ltd.; metal windows and dome lights, Rea Metal Casements (1932) Ltd., Williams & Watson Ltd.; hollow tile suspended floors and flat roofs, Diespeker & Co. Ltd.; cast stone, Forticrete Ltd.; lift installation, The Express Lift Co. Ltd.; heating installation, Young, Austen & Young Ltd.; electrical installation and fire alarm system, The Merseyside & North Wales Electricity Board; electric lighting fittings, Courtney, Pope (Electrical) Ltd., Falk, Stadelmann & Co. Ltd., The Merchant Adventurers of London Ltd., Troughton & Young (Lighting) Ltd.; patent flooring, Semtex Ltd., The Granwood Flooring Co. Ltd.; floor and wall tiling, Bangham & Fleming Ltd.; staircase balustrade, fire escape, railings and grilles, George Lowe & Sons Ltd.; sanitary fittings, Rowe Bros. & Co. Ltd.; library shelving & fittings, Tyson (Contractors) Ltd., D. Mathews & Son Ltd.; curtain rails and ironmongery, Campbell & Mabbs Ltd.; flat roof covering, Permanite Ltd.; rubber flooring, Pollards: terrazzo partitions in lavatories, Conways (Tiles & Terrazzo) Ltd.; cloakroom fittings, Parker Winder & Achurch Ltd.; roller shutter grilles, Haskins Rolling Shutters; Westmorland green stone facings, John Stubbs (Marble & Quarzite) Ltd.; main entrance doors, Joseph Rawlinson & Sons Ltd.; suspended ceilings, The Trussed Concrete Steel Co. Ltd.; external lettered signs, D. Mathews & Son Ltd.; terrazzo flooring, Harold Westwell (Tilecraft) Ltd.; internal lettering, Quiggin Bros. Ltd., London Industrial Art Ltd., Butler Jones (Nameplates) Ltd.; clocks, The Synchromatic Time Recording Co. Ltd.

Aldermans Green Primary School in Aldermans Green Road, Coventry, Warwickshire, for the Coventry Education Authority. (Pages 790-792.) Architects: A. M. Gear, the late Edric Neel and Rodney Thomas (formerly Arcon); Partner in charge: A. M. Gear, A.R.I.B.A.; Assistant architect: J. T. Briars, A.R.I.B.A. Sculpture: W. L. Freeth. Consultants (heating and electrical): Brandt & O'dell. Quantity surveyors: Davis, Belfield & Everest. Clerk of Works: J. S. Dixon. General foreman: G. Perks. General contractor: Higgs & Hill Ltd. Subcontractors: reinforced concrete, The Kleine Co. Ltd.; bricks, stone, artificial stone, supplied by London & Sussex Merchants Ltd.; roofing felt, William Briggs & Son Ltd.; concrete blocks, structural steel, casements, sunblinds, Hills (West Bromwich) Ltd.; partitions, Bellrock Gypsum Industries Ltd.; glass, supplied by Pilkington Bros. Ltd.; woodblock flooring, Hollis Bros. Ltd.; patent flooring, The Resilient Tile & Flooring Co. (Ealing) Ltd.; central heating, boilers, A. G. Manley & Co.; gasfitting, Ministry of Works; electric wiring, The National Electrical & Engineering Co. (Birmingham) Ltd.; electric light fixtures, Hartley Electromotives Ltd.; plumbing, W. O. Baker; sanitary fittings, Adamsez Ltd.; door furniture, Comyn Ching & Co. (London) Ltd.; rolling shutters, Haskins; iron staircases, metalwork, Light Steelwork (1925) Ltd.; plaster, George Nicholls & Co. Ltd.; fibrous plaster, C. E. Pinn & Co.; joinery, Batty & Co. Ltd.; tiling, Carter & Co. (London) Ltd.; paint, Leyland Paint & Varnish Co. Ltd.; suspended ceiling, The Trussed Concrete Steel Co. Ltd.; shrubs and trees, Coventry Corporation; cloakroom fittings, B. Finch & Co. Ltd.; clocks, Gent & Co. Ltd.

The list of contractors for factories for Alford & Alder (Engineers), Ltd., and Rolls Razor Ltd., in Hemel Hempstead New Town, designed by W. Leslie Jones, L.R.I.B.A. (pages 780-781) and offices in Holloway, London, N.7, designed by Hughes & Bicknell, M./M.A., F./F.R.I.B.A., (pages 782-783) are omitted due to lack of space, but will appear in a later issue.

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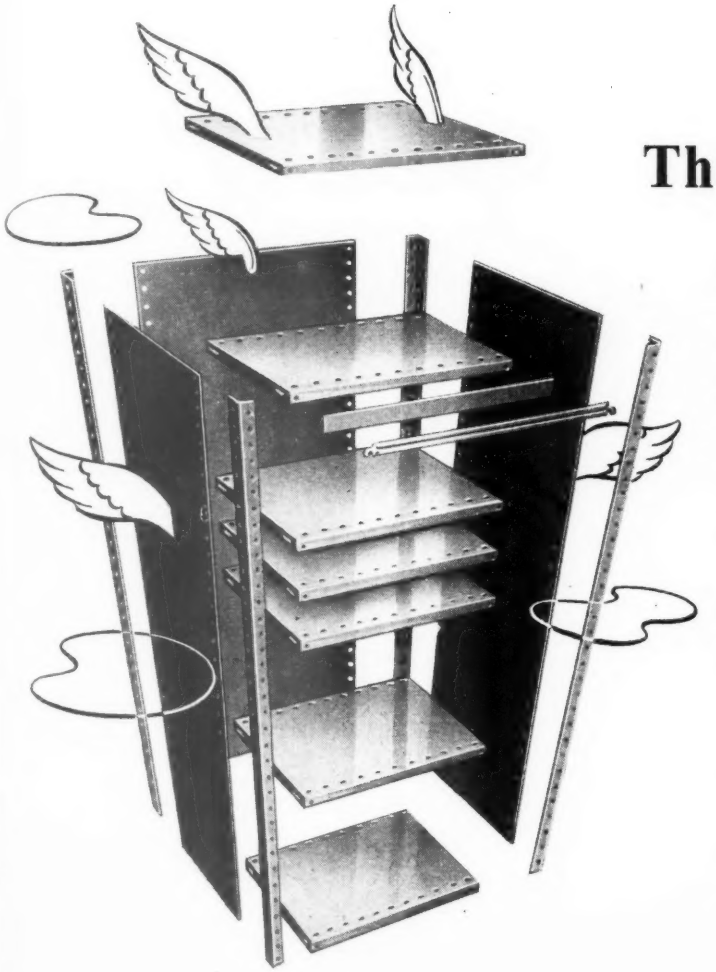

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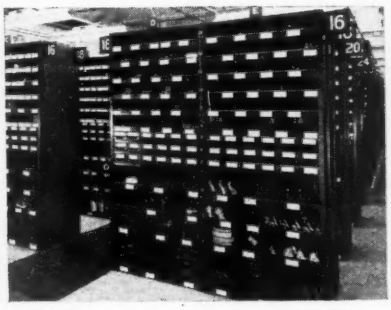

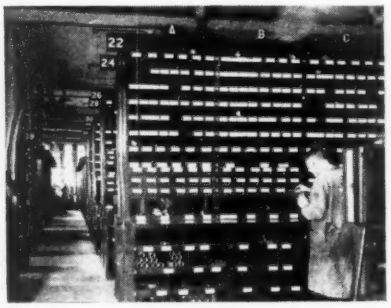

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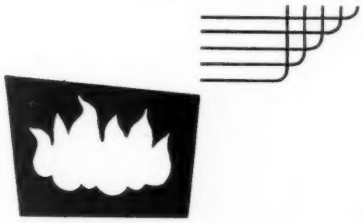

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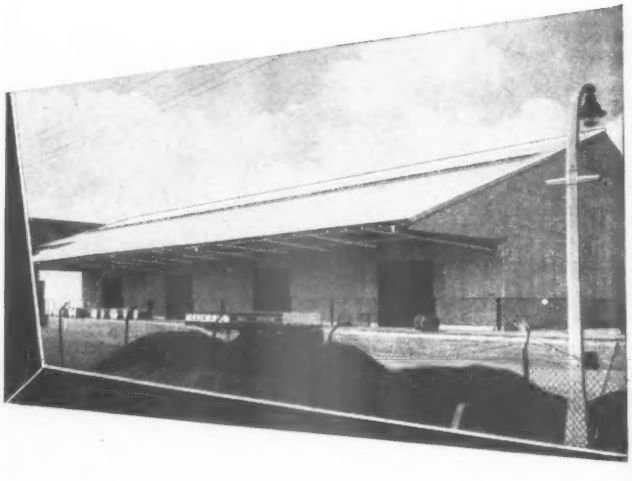

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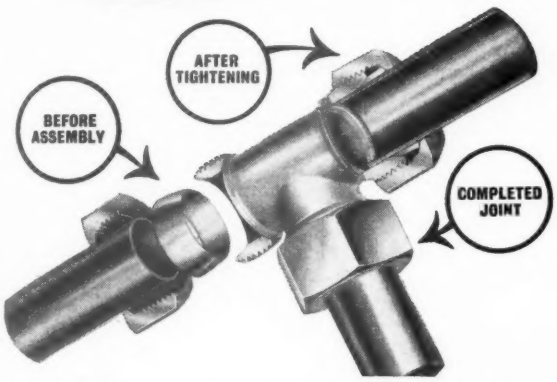

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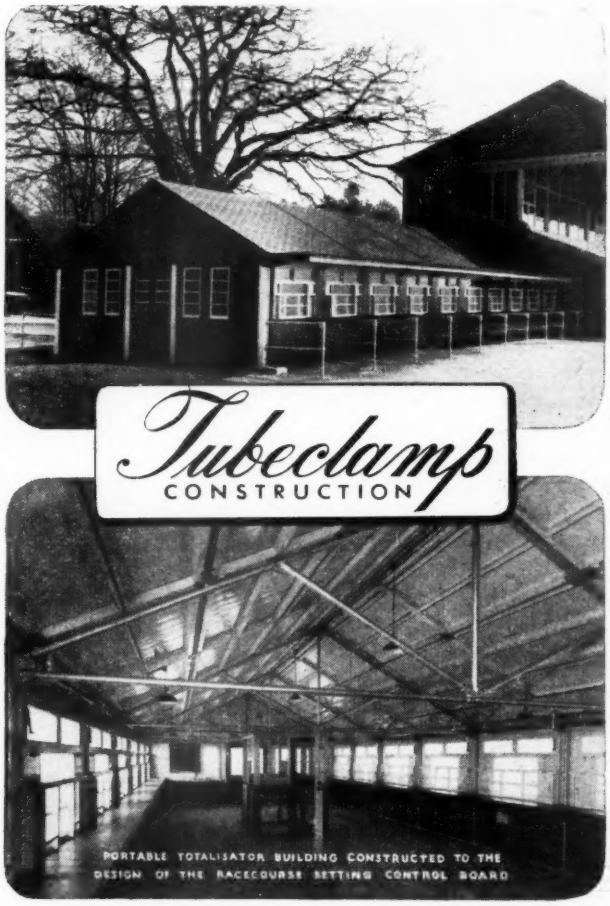
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JANUARY 21, 1954

and will include the following well-known features in addition to other special articles: *Astragal's Review of the Year (1953); Buildings of the Year* by J. M. Richards; *Men of the Year; Foreign Architecture* by Fello Atkinson.

The advertisements in this number are always of particular interest and reservations are requested as early as possible. Please send your application immediately to the Advertisement Manager, *The Architects' Journal*, Architectural Press Ltd., 9-13, Queen Anne's Gate, London, S.W.1. 'Phone WHItehall 0611.

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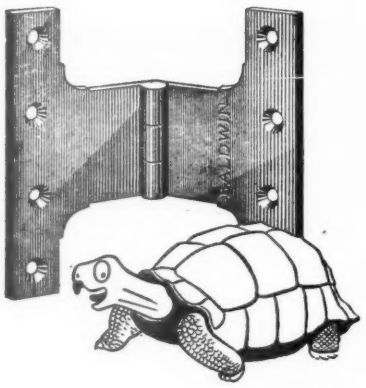

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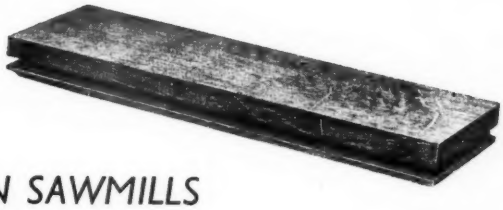

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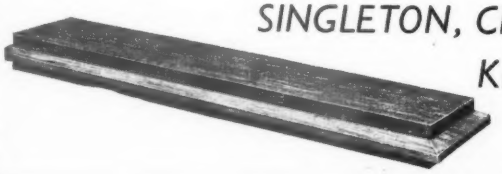
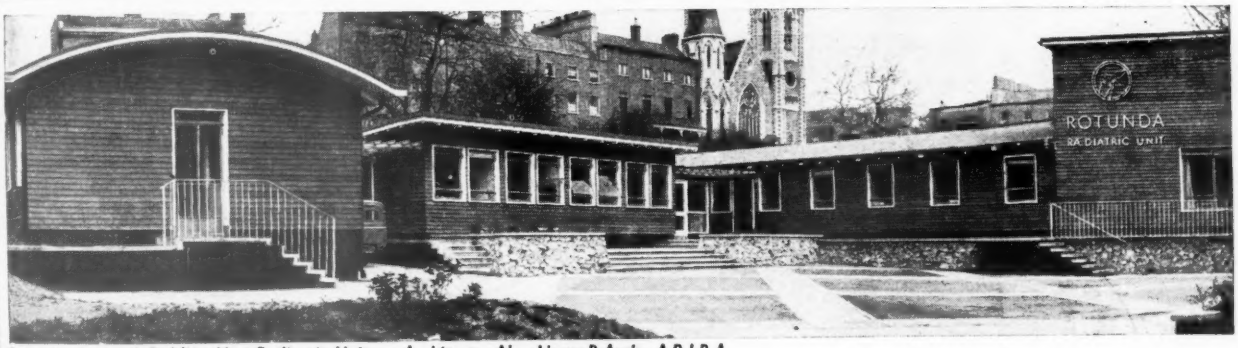
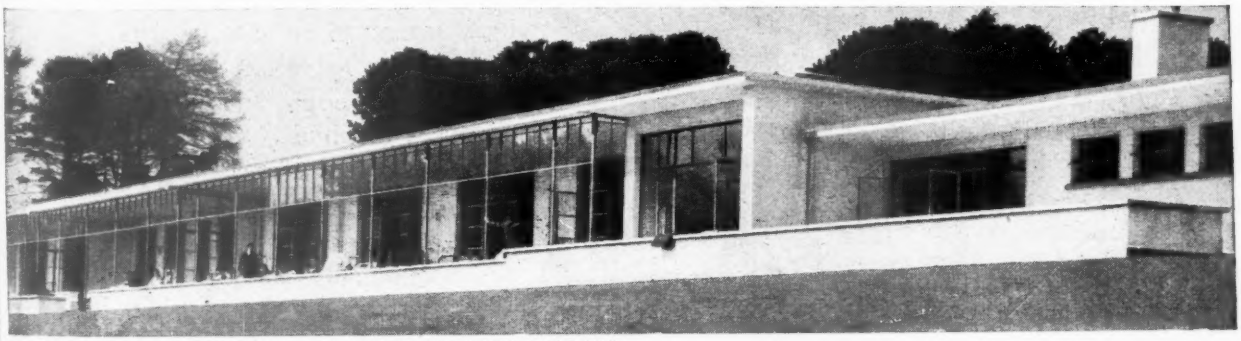




Rotunda Hospital, Dublin: New Radiatric Unit. Architect: Alan Hope, B.Arch., A.R.I.B.A.



Newcastle Sanatorium, Co. Wicklow. Architect: Alfred Phillips, M.R.I.A.I.

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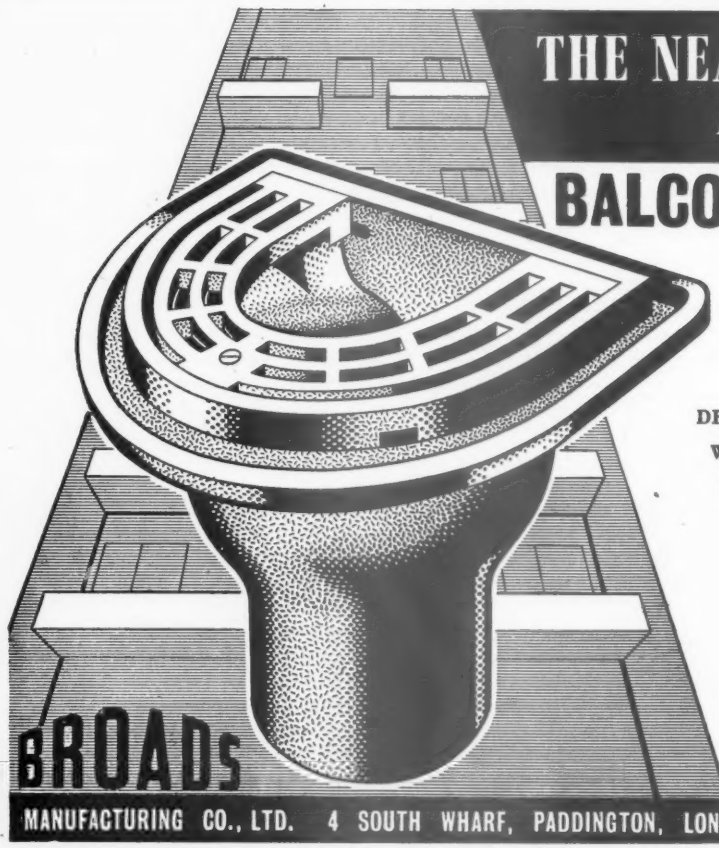

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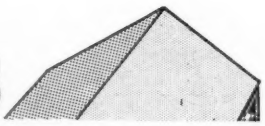

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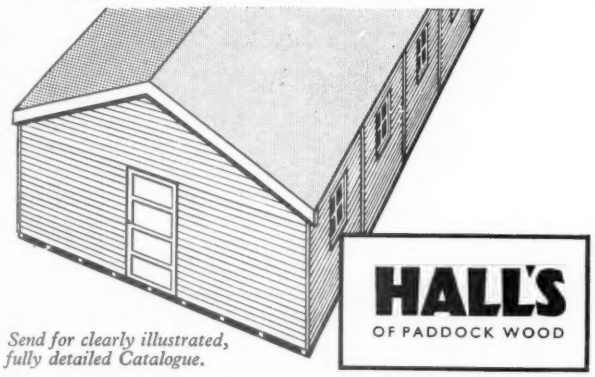

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CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Public and Official Announcements

25s. per inch; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

PEAK DISTRICT NATIONAL PARK.

PLANNING OFFICER required by PEAK PARK PLANNING BOARD. Salary: £1,350 × £50 —£1,600. Office at Bakewell. Will also be required to act as Area Planning Officer for Derbyshire County Council for part of north-west Derbyshire. Must be Member or Associate Member of Town Planning Institute; additional technical qualifications desirable; should have considerable practical experience in administration of a Planning Department, preferably including work in areas of high amenity. Application forms and further particulars from Clerk to the Board, County Offices, St. Mary's Gate, Derby. Closing date: Saturday, 9th January, 1954. 1214

CITY OF SALFORD.
TECHNICAL STAFF.

Applications are invited for the undermentioned appointments on the permanent establishment of the City Engineer and Surveyor's Department:—

(*a*) ARCHITECTURAL ASSISTANT. A.P.T., Grade IV (£555 to £600).

(*b*) JUNIOR ARCHITECTURAL ASSISTANT. A.P.T., Grade II to III, according to qualifications and experience (£495 to £540) (£525 to £570).

The appointments are pensionable and subject to the National Scheme of Conditions of Service and to the passing of a medical examination.

Applicants for position (*a*) should have passed the Intermediate Examination of the R.I.B.A. or have an equivalent qualification, and have worked in an Architectural Office for two years.

Facilities will be given to Juniors to obtain professional qualifications.

Applications, stating age, qualifications and experience, and accompanied by copies of two recent testimonials, are to be addressed to the City Engineer and Surveyor, Town Hall, Salford, 3, in envelopes endorsed for the appointment for which application is made, quoting Ref. "A.J.," so as to be received not later than Friday, 8th January, 1954.

H. H. TOMSON,
Town Clerk.
1215

COUNTY BOROUGH OF GREAT YARMOUTH.
EDUCATION COMMITTEE.
SCHOOLS ARCHITECT'S DEPARTMENT.

Applications are invited from Associate Members of the Royal Institute of British Architects for the appointment of PRINCIPAL ASSISTANT ARCHITECT on the permanent staff, Salary Grade VIII (£760-£835).

Candidates should have a knowledge of modern school design and construction. The person appointed will be in charge of the Drawing Office, and will be required to act as Deputy to the Schools Architect.

Further particulars and forms are to be obtained from The Schools Architect, 22, Euston Road, Great Yarmouth, to whom they should be returned by Tuesday, 12th January, 1954.

W. G. FARROW,
Chief Education Officer.
1227

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

Vacancies for TECHNICAL ASSISTANTS (up to £721) in Structural Engineering Division. Work includes steelwork and reinforced concrete design and detailing for Council's building, and checking structural designs and calculations under London Building Acts.

Application forms from Architect (AR/EK/SE/5), County Hall, S.E.1. (1270) 1057

HACKNEY BOROUGH COUNCIL require:—

(i) JUNIOR ARCHITECTURAL ASSISTANT. Salary £495 per annum-£570 per annum (A.P.T. II-III) plus London Weighting Allowance.

Candidates must have had a good architectural training and preference will be given to those who have passed the R.I.B.A. Intermediate or equivalent examination.

(ii) ARCHITECTURAL DRAUGHTSMAN. Salary £465 per annum-£495 per annum (A.P.T. I) plus London Weighting Allowance.

Candidates must have had a good technical education, and must be neat and expeditious architectural draughtsmen, with a sound knowledge of building construction.

Application form and general conditions of appointment obtainable from me, returnable, duly endorsed by first post 7th January, 1954.

DUDLEY SORRELL,
Town Clerk.

Town Hall, Hackney, E.8.
19th November, 1953. 1261

NORTH RIDING EDUCATION COMMITTEE. Vacancy for ASSISTANT ARCHITECT, Grade A.P.T., VI and VII. Salary £670, rising by annual increments to £785. Candidates must be Associate Members of the R.I.B.A. Previous experience may be taken into account in fixing commencing salary. Car, travelling and subsistence allowances. Local Government Superannuation Act. Send stamped envelope for form and particulars. Closing date for applications, 8th January, 1954. Canvassing disqualifies. F. Barraclough, County Hall, Northallerton. 1257

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.

Applications are invited for the following positions within the Division:—

CIVIL ENGINEERING DRAUGHTSMEN, Construction Department. (Vacancy No. 22/53.)

Candidates should have experience in design and detail of reinforced concrete structures, piled and slab foundations for heavy plant, culverts, cable subways, etc., for general building construction drainage and sanitation schemes, associated with official and administrative buildings.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

ENGINEERING DRAUGHTSMEN (MECHANICAL), Construction Department. (Vacancy No. 44/53.)

Senior Draughtsmen are required in the Mechanical Section of the Construction Department at North Wilford Power Station. Candidates should have experience in one or more of the following:—

(i) Design and layout of Power Station equipment, including turbo-alternators, boiler plant, coal and ash plant, and general station auxiliaries.
(ii) H.P. and L.P. steam and feed pipework. Condensing plant and feed heating systems.
(iii) Conveyor plant, coal handling systems, and material handling of station auxiliary equipment.

Salary and conditions of service will be in accordance with the National Joint Board Agreement, Grade 5 (£567-£671 per annum) and Grade 6 (£433-£567 per annum) of Schedule D, according to experience.

ENGINEERING DRAUGHTSMEN (ELECTRICAL), Construction Department. (Vacancy No. 61/53.)

Candidates should have experience in the preparation of layouts and diagrams for the installation of E.H.T. and L.T. Switchgear, transformers, E.H.T. and L.T. cables; knowledge of protective gear systems would be an advantage.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

The above positions will be pensionable within the provisions of the British Electricity Authority and Area Boards Superannuation Scheme.

Applications should be submitted on the official form, which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned to the undersigned by the dates stated. Please quote Vacancy Number.

L. F. JEFFREY,
Divisional Controller.
1232

NORTHAMPTON BOROUGH ARCHITECT'S DEPARTMENT.

(1) SENIOR ASSISTANT ARCHITECT (EDUCATION), A.P.T. VII (£710-£785).

(2) JUNIOR ARCHITECTURAL ASSISTANT. A.P.T., I (£465-£510).

Particulars of above appointments and forms of application to be returned by 2nd January, 1954, may be obtained from the Borough Architect's Department, Guildhall, Northampton.

C. E. VIVIAN ROWE, *Town Clerk.*
1246

CITY AND COUNTY OF BRISTOL.
APPOINTMENT OF CHIEF QUANTITY SURVEYOR.

Applications are invited for this permanent appointment. Grade A.P.T. IX (£815-£935 per annum). The successful applicant will be required to take charge of a small Quantity Surveying Section about to be formed in my department.

Further particulars and application form obtainable from me, to whom applications must be submitted by 31st December, 1953.

J. NELSON MEREDITH, F.R.I.B.A.,
City Architect.

The Council House, College Green,
Bristol, 1.
11th December, 1953. 1244

LINDSEY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Vacancy on permanent staff for QUANTITY SURVEYOR Grade A.P.T., Va and VI (£625-£735), for persons holding the Final R.I.C.S., or Grade A.P.T., IV (£555-£600), for persons holding the Intermediate R.I.C.S.

N.J.C. Conditions of Service. Canvassing will disqualify. Relationship to member or senior officer of the Council to be disclosed in writing with application.

Applications, stating age qualifications and experience with names of two persons to whom reference can be made, to be sent to me not later than 4th January, 1954.

A. RONALD CLARK, A.R.I.B.A., A.M.T.P.I.,
County Architect.

County Offices, Lincoln. 1245

THE UNIVERSITY OF LIVERPOOL.
LEVER CHAIR OF CIVIC DESIGN.

The Council of the University invites applications for the Lever Chair of Civic Design. Further particulars may be obtained from the undersigned, by whom twelve copies of applications (one in the case of overseas candidates) should be received not later than 30th January, 1954.

STANLEY DUMBELL,
Registrar.
1233

COUNTY BOROUGH OF GREAT YARMOUTH.
APPOINTMENT OF ASSISTANT ARCHITECT.

Applications are invited for the appointment of a temporary Assistant Architect, in the Borough Engineer's Department, at a salary in accordance with Grade A.P.T., VI (£670-£735), of the National Conditions of Service, for the preparation of drawings and supervising the construction of a Central Library. Applicants should have a contemporary outlook, with experience in the construction of large buildings, and must be members of the Royal Institute of British Architects. Housing accommodation will be offered by the Council if required.

The appointment will be terminable by one month's notice on either side, and the successful candidate will be required to contribute to the Local Government Superannuation Fund, subject to passing a medical examination.

Applications, stating age, qualifications, present and previous appointments, and giving details of experience, together with the names of two persons to whom reference may be made, should be enclosed in an envelope endorsed "Temporary Assistant Architect," and must be received by me not later than Wednesday, 6th January, 1954. Candidates must disclose in writing whether they are related to any officer or member of the Council. Canvassing disqualifies.

FARRA CONWAY,
Town Clerk.

Town Hall, Great Yarmouth.
10th December, 1953. 1248

BOROUGH OF TAUNTON.
ARCHITECT'S DEPARTMENT.

Applications are invited for the undermentioned appointment in the Borough Housing Architect's Department:—

ASSISTANT ARCHITECT (A.P.T., Grade V). Salary: £595, rising by annual increments to £645 p.a.

Applicants should be qualified Architects, having had experience in the design and construction of Municipal Housing Estates.

The Council have adopted the National Scheme of Conditions of Service, and the appointment will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act 1937. The successful candidate will be required to pass a medical examination.

Consideration will be given to housing accommodation if required.

Applications, stating age, qualifications, previous experience and the earliest date when available, together with names and addresses of two referees, should be sent to C. Bacon, F.R.I.B.A., Borough Housing Architect, Flook House, Station Road, Taunton, to reach him not later than Wednesday, 30th December, 1953.

L. ATWELL,
Town Clerk.

Municipal Buildings, Taunton. 1247

BIRMINGHAM REGIONAL HOSPITAL BOARD. Applications invited for following appointments in Architect's Department:

(1) ARCHITECTURAL ASSISTANT (£440 × £25 (1) × £20 (8)—£625 p.a.), according to age and experience (maximum point of entry £525 p.a.). Successful candidate will give technical assistance to professional officers: Intermediate Examination R.I.B.A. or equivalent essential. Candidates should have flair for contemporary design, including new methods of construction and interior decoration.

(2) ASSISTANT QUANTITY SURVEYOR (£600 × £25 (7) × £30 (3)—£865 p.a.). Applicants should have Final R.I.C.S. and be fully experienced in taking off and preparing bills of quantities and settling of final accounts.

Appointments superannuable. Write, naming three referees, to Secretary, 10, Augustus Road, Birmingham, 15, by 4th January, 1954. 1264

HARROW URBAN DISTRICT COUNCIL.
ENGINEER & SURVEYOR'S DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT, A.P.T., Grade IV, Salary Scale £555-£600 per annum plus London Weighting. Candidates should have good office experience and preference will be given to those holding recognised professional qualifications.

Duties include the preparation of drawings and specifications and supervision of works on new buildings or works of maintenance and repair.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, the passing of a medical examination and to the National Joint Council's Scheme of Conditions of Service.

The Council are unable to assist in obtaining housing accommodation. Canvassing will be a disqualification.

Forms of application can be obtained from the undersigned, to whom they should be returned not later than Friday, 8th January, 1954.

D. H. PRITCHARD,
Clerk of the Council.

Council Offices,
Harrow Weald Lodge, Harrow,
Middlesex. 1260

DERBY CORPORATION.
BOROUGH ARCHITECT'S DEPARTMENT.
JUNIOR ARCHITECT, Grade I/II. Salary £465 to £540 per annum, commencing at £465, and National Conditions of Service.
Applicants should be not less than 21 years of age.
Qualifications: Preliminary R.I.B.A. and experience in general architectural work.
Permanent staff appointment, subject to one month's notice and pensionable subject to medical examination.
Forms of application obtainable from, and to be returned to, the Borough Architect, The Council House, not later than 4th January, 1954.
Canvassing disqualifies.
E. H. NICHOLS,
Town Clerk.
1258

BASILDON DEVELOPMENT CORPORATION.
CHIEF ARCHITECT'S DEPARTMENT.
Applications are invited for the posts of JUNIOR ASSISTANT ARCHITECTS, Grade VB in the salary range £535-£585 on the staff of the Chief Architect/Planner, N. Tweddell, A.R.I.B.A. Preference will be given to Associate Members of the R.I.B.A. and a good standard of draughtsmanship and knowledge of working drawings is required. Commencing salary within the grade would be in accordance with experience and ability. The appointments are subject to the provisions of the Local Government and Other Officers' Superannuation Act and the successful applicants will be required to pass a medical examination. Under suitable conditions, houses in the new town will be available to successful candidates. Applications on form obtainable from the Chief Architect should reach the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, by Friday, 1st January, 1954. 1259

NATIONAL COAL BOARD—N.W. DIVISION.
QUANTITY SURVEYOR, Grade II, required for Architect's Branch, Manchester.
Applicants should be capable of taking off quantities, working up dimensions, abstracting, writing Bills of Quantities, preparing final accounts and taking site measurements, and should preferably be Associates of R.I.C.S. and have had not less than one year's subsequent practical experience.
Salary dependent on experience within Board range £600-£900.
Applications, stating age, education, experience, recent appointments and salary, to Establishment Officer, 40, Portland Street, Manchester, 1, by 30th December. 1249

HER MAJESTY'S COLONIAL SERVICE.
TOWN PLANNING OFFICER (SURVEYS AND TOWN PLANNING DEPARTMENT), TANGANYIKA.
Duties comprise collection of basic data, preparation of outline planning schemes, detailed physical planning of areas within various use zones, re-development planning, control of development, advice to Local Authorities on land utilisation, etc.
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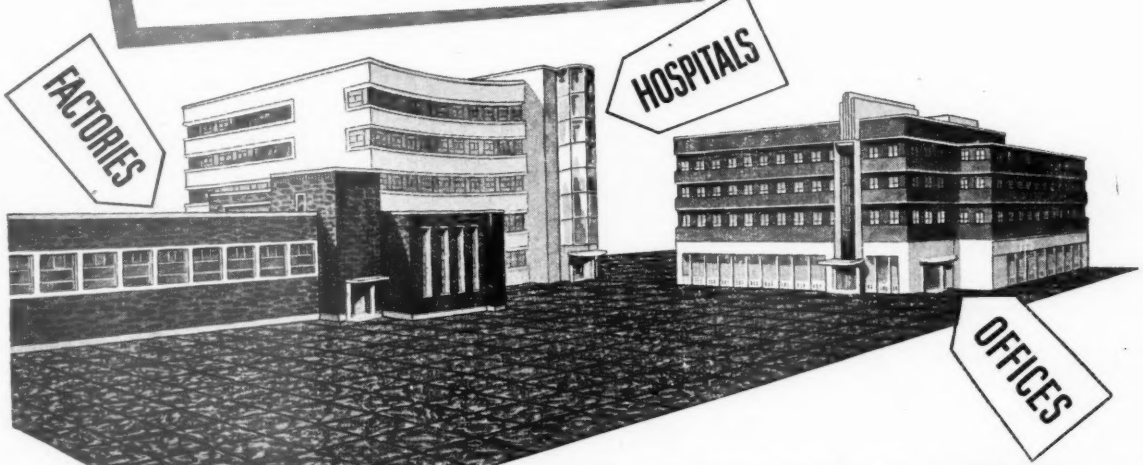

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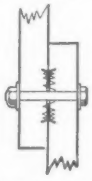
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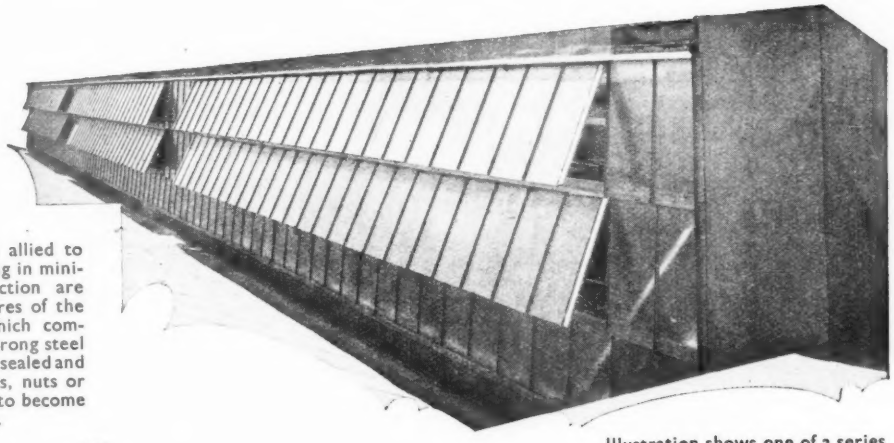

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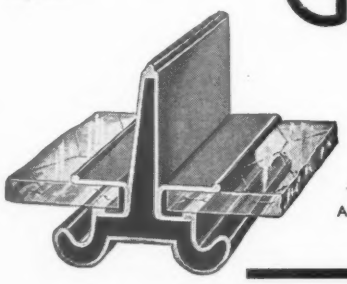

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